FIRE ENGINEERING

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The Journal of the Fire Protection Profession Since 1877

OCTOBER, 1946

Molten magnesium exploding when struck by fire stream at storage dump fire at Indianapolis, Ind.

A CASE - SHEPPERD - MANN PUBLICATION

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Smoke Suffocation
Gas Poisoning
Drowning, or
Electric Shock

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Whatever the cause of breathing failure, it is now well established in the medical laboratory and in the field where hundreds of Fire Departments and corporations are using Emerson resuscitators every day on all kinds of asphyxia that they provide you maximum protection against asphyxia death.

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the *new* TRAFFIK-KING Siren

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Postwar traffic demands the best. You will have it in the Model C-6 Traffik-King combining the smooth silent PROPELLO-RAY light with the most powerful coaster siren.

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FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION *and* FIRE SERVICE

CONTENTS

Vol. 99 — October, 1946 — No. 10

	Page
With the Editor By Fred Shepperd	751
Learning by Doing as Well as by Instruction Gains Ground By Roi B. Woolley	752
Water Rescues a Common Task for Florida Firemen By Frank Gillooly	756
Westchester County Holds Novel Training Institute	757
New Fire Service Building Dedicated at Maryland School By Irving W. Johnson	758
Dominion Association of Fire Chiefs Has Thirty-Eighth Meeting	760
Novel Calculator Developed for Solving Hydraulic Problems	761
Persons in the News	762
Short Cuts and Gadgets	764
The Watch Desk By Roi B. Woolley	765
News of the Manufacturers	766
False Alarms	767
Trade Literature	780
Book Shelf	780
Convention Dates	780
Questions and Answers	782
The Round Table Use of Firemen for Interior Painting of Stations	786
What's Burning	789
Echoes of the War By Roi B. Woolley	792

FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

Keep Tuned To Fire Engineering

NOT so many years ago—

- Whenever they couldn't account for the cause of a fire, they attributed it to "crossed wires."
- To say that water could extinguish a fire in volatile oils was madness.
- The district of a fire company was not gauged geographically or by protection of hazards, but by the limitations of the equine motive power to get the apparatus to the scene of the fire.
- The all-metal self-raising ladder; carbon dioxide extinguisher; high pressure fog and fog-foam, "Water-Wetters," and a hundred other innovations were never dreamed of or at least were considered figments of a disordered imagination.
- Everyone of us has lived to see what were the wildest visions of a Jules Verne come true. Can any of us say, therefore, with assurance, that such-and-such an idea is no good, or such-and-such a thing can't be done?
- The editorial and advertising pages of FIRE ENGINEERING each month contain facts which a generation ago would have been considered pure fantasy.
- What will tomorrow bring? Keep tuned to FIRE ENGINEERING and find out!

The Publishers

FIRE ENGINEERING

The Journal of the Fire Profession since 1877; published on the fifteenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y., also publishers of *Water Works Engineering, Sewage Works Engineering*, etc. ¶Subscription price: U. S., Latin America and Canada, $2.50 a year; Foreign, $3.50; Single copies, 25c. ¶Member of Audit Bureau of Circulations and Associated Business Papers, Inc. ¶Entered as second-class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 3, 1879. ¶Contents of this issue copyrighted, 1946, by Case-Shepperd-Mann Publishing Corp. President and Advertising Director, KARL M. MANN; Vice-President and General Manager, I. HERBERT CASE; Secretary and Editorial Director, FRED SHEPPERD; Assistant Advertising Director, WALTER H. FREDERICKS; Advertising Manager, WILLIAM J. GIBSON; Circulation Manager, W. H. TOPHAM. CHICAGO OFFICE: W. S. CLEVENGER and L. M. ROCHE, 6 No. Michigan Ave., Chicago 2, Ill.; SAN FRANCISCO: CHARLES H. WOOLLEY, 605 Market Street, San Francisco 5, Calif.; LOS ANGELES: AUGUST HAUSER, 6000 Miramonte Blvd., Los Angeles 1, Calif. ¶Printed in U. S. A.

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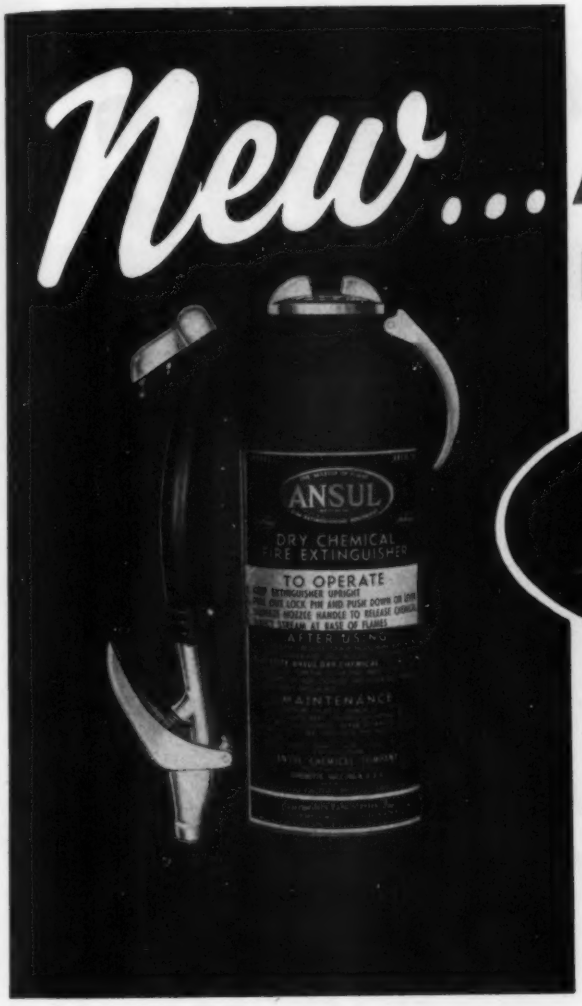

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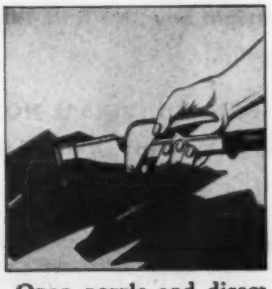
Ready . . . in a Flash!

Simply remove ring-pin and push lever down.



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FIRE EXTINGUISHER DIVISION • MARINETTE, WIS.

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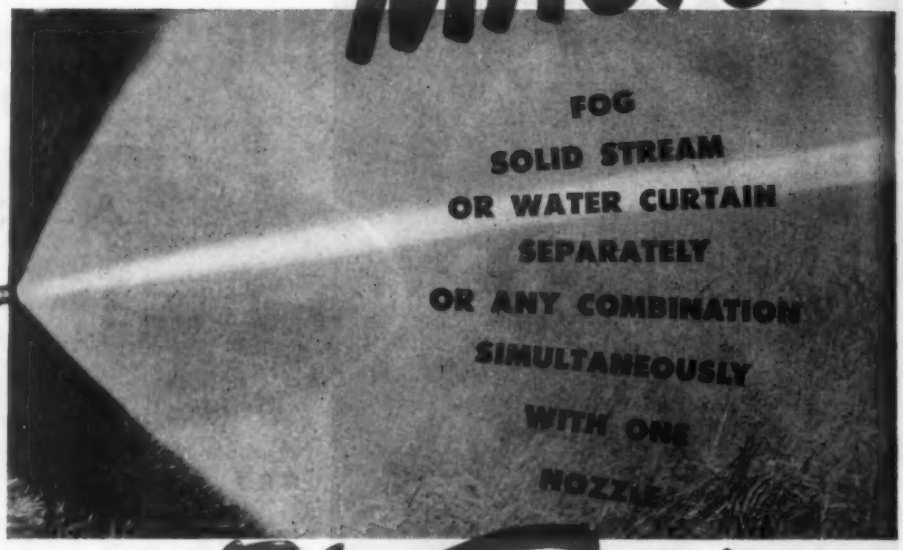

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3 SIZES

1" Booster Nozzle
Length 7 in.
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Fires won't wait for nozzle changes. When you need a water curtain, fog, solid stream or some combination you need it *right now*. No time to run for another nozzle or spray tip.

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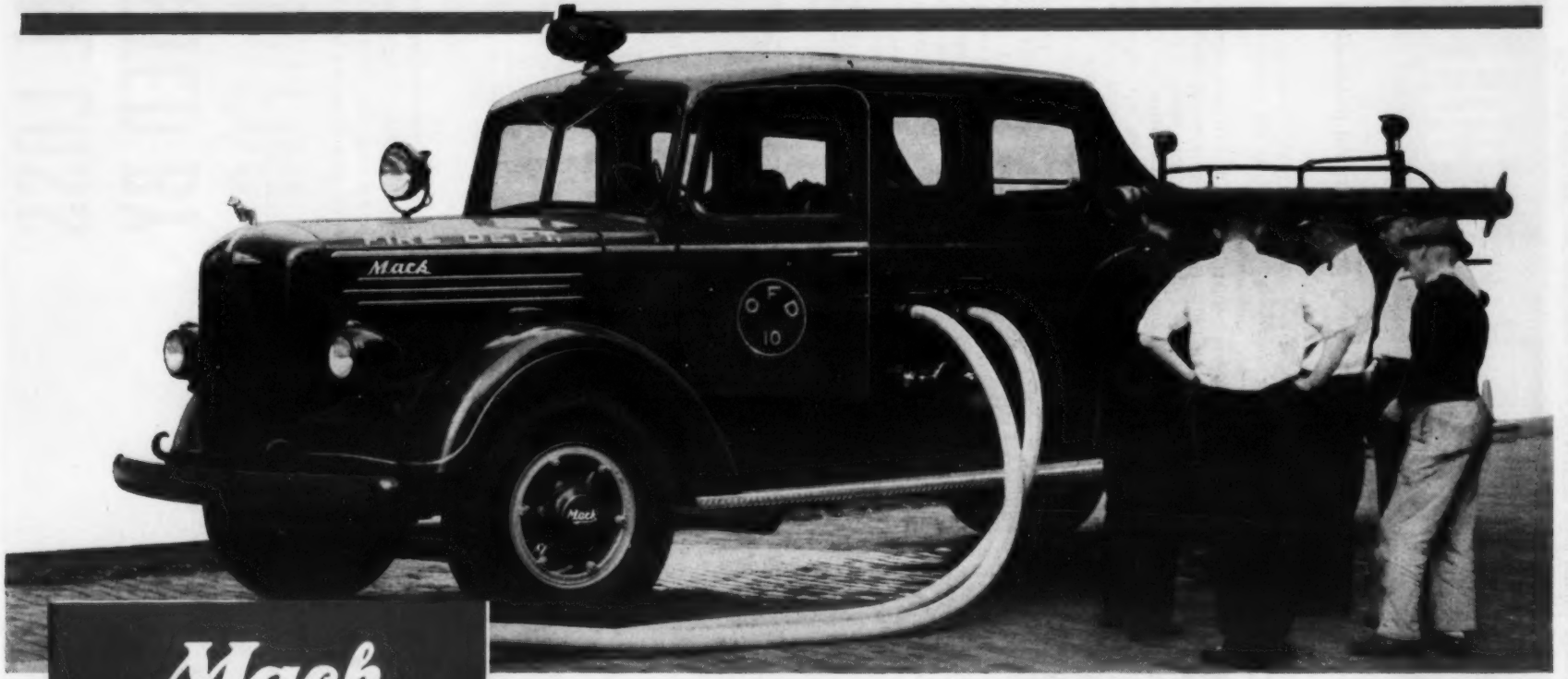

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FIRE APPARATUS

MACK MANUFACTURING CORPORATION • Fire Engine Dept.
Empire State Building, New York 1, N. Y.

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Mack Fire Apparatus now guards more than a thousand communities. Progressive town planners the country over look to Mack's superior performance and dependability with absolute confidence. Why not give your town the same security? Talk it over with a Mack fire equipment expert.

If your community needs additional fire-fighting equipment or replacements, think of Mack. Remember, Mack Fire Apparatus is backed by the greatest engineering resources in the industry.

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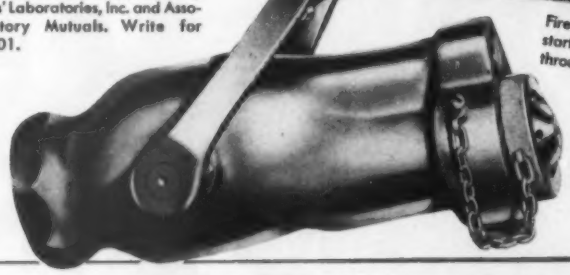
TOTAL LOSS AVERTED BY WaterFOG

Bad rural Class A Fire with half-hour start extinguished by two Rockwood SG-40 Nozzles in 20 minutes . . . with only 50 psi nozzle pressure.

Fire in the home of Harold E. Morgan, Wilbraham, Mass., started in upper bedroom. Firemen made first entry by ladder through second-floor window facing camera.



SG-40, the triple-action nozzle — discharges high-velocity WaterFOG, low-velocity WaterFOG from extension applicator, or straight stream. Approved by Underwriters' Laboratories, Inc. and Associated Factory Mutuals. Write for Bulletin C-501.

If the Wilbraham, Mass. Fire Department, headed by Chief Ralph E. Tupper, needed proof that Rockwood WaterFOG was effective on Class A Fires, they got it on February 11, 1946.

Arriving at this rural home after a delayed call and a slow run over icy roads, they found the upper section well involved, the fire having about a half-hour headway. The owner had resigned himself to a total loss.

With two ¾-inch booster lines equipped with ¾-inch SG-40 Rockwood WaterFOG Nozzles, they checked the fire in 8 minutes . . . completely extinguished the fire in 20 minutes. Source of water was apparatus tanks and a nearby well. The 110 psi at the pump was reduced to 50 psi at the nozzles by the friction of the 200-foot lines.

Chief Tupper's conclusion was that only the cellar hole of this five-room home would have been left if they had been obliged to use straight streams with such a limited supply of water. The owner, a carpenter, was amazed at the slight fire and water damage.

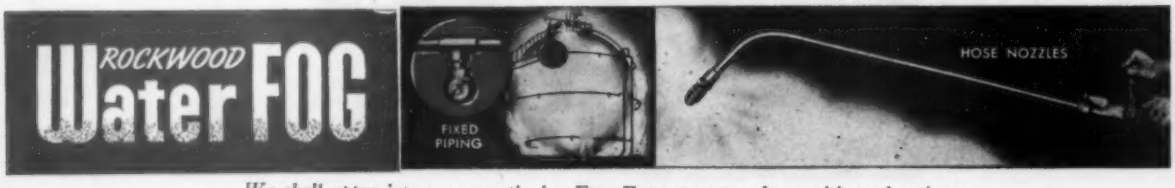
More and more fire departments and industrial plants are adding WaterFOG to their straight-stream facilities. The extra value which the Rockwood SG-40 Nozzle gives you is that it supplies both . . . because the control handle changes it from WaterFOG to Straight Stream instantly.

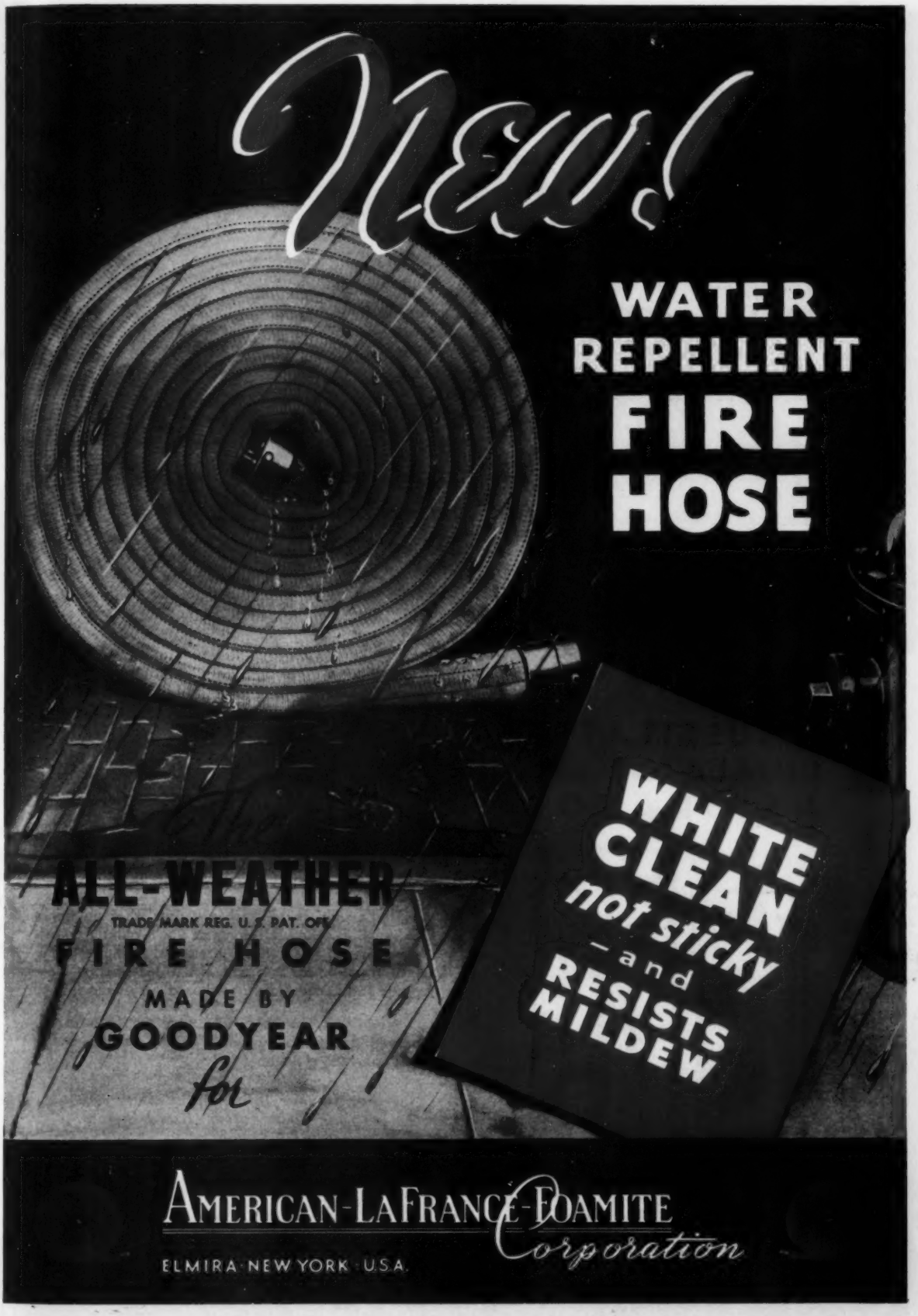
Write for Bulletin 123 describing how WaterFOG puts out fires faster, protects men and equipment, reduces water damage. Natural-color movies (16 mm.) also available. ROCKWOOD SPRINKLER COMPANY, 54 Harlow Street, Worcester 5, Massachusetts. *Specialists in Fire Protection Engineering, Equipment and Installation since 1907.*

View in attic shows deep charring indicating extent to which fire had gained headway before application of WaterFOG.

View of one end of living room showing very little fire or water damage below the second floor.

Water Engineered by Rockwood Cools, Confines, Smothers Class A and Oil Fires

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A Mighty Column of Water Wrapped in

MANHATTAN FIRE HOSE!

and it'll stay on the mark until the fire is out, because it's

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MILDEW-PROOF! FREEZE-PROOF!

No bursting at a crucial time, due to mildew rot. Doesn't get heavier and heavier because of water-soaked jackets. Won't freeze stiff in winter. Needs no arduous drying-out attention.

Manhattan's Radio-Active Treatment makes cotton fire hose jackets moisture repellent. Radio-Active Treatment doesn't sweat out or rub off. Hose life is lengthened to the limit of natural wear, barring accident.

Manhattan developed and patented Radio-Active Treatment for Fire Hose and is the sole manufacturer. With the Flat-Folding feature, it is easier to handle.

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9. Treatment reduces maintenance cost by eliminating drying of jackets.
10. Flat folding, easy to handle.

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MANHATTAN RUBBER DIVISION

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DUO Safety

all Aluminum FIRE LADDERS

SERIES 700A

THE STANDARD OF SAFETY— *plus* STRENGTH *plus* LIGHTNESS

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. . . No fire department, large or small, should be without the high capacity, flexible, efficient Akron Multiversal Portable Deluge Nozzle.

COMPLETE one-piece-unit — ready to connect the number of hose lines desired.

SELF-SUSTAINING — once placed in position needs no further attention.

MAXIMUM FLEXIBILITY — stream may be directed up or down, or in a complete circle.

MAXIMUM CAPACITY — handles from one to four hose lines.

FIREMAN FREDDIE SAYS: *Every Akron Deluge Nozzle in use is like adding several fire fighters to the force.*

The Akron Multiversal Nozzle Running Board Fixture, illustrated at the right, provides quick, efficient handling at the scene of action. Designed for mounting entire unit on running board of apparatus. A compact, quickly removable unit.

Also available — Fixture for mounting on top of apparatus, permitting use of Multiversal as a deck pipe.

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All fully protected from fire by NATIONAL FOAM

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National Foams, fire protection specialists, smother flames by thick, tough, enduring foam blankets quickly applied. Threatened areas are insulated; flashbacks are blocked. National Foams stick to angles as well as flowing freely over flat areas, thoroughly sealing off fire-feeding gases.

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Write, wire or phone today for what trained technicians can do for you. There is no substitute for fire-fighting experience.

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SPECIALIZING IN FOAM FIRE PROTECTION

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The right way is to back up fire prevention with essential fire-fighting apparatus. There is no better assurance of adequate fire service than to have a Ward LaFrance Triple Combination Pumper. Built to meet emergencies with unfailing service, the Ward LaFrance Pumper has the stamina and fire-fighting abilities so necessary to meet unexpected demands.

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Great American Industries, Inc.

ELMIRA, NEW YORK

FOR ALL TYPES OF FIRES

Experience shows the FMC High-Pressure Fog Fire Fighter is ideal for fighting any type fire.

Here's why: FMC equipment is *complete*, has everything you need—it travels fast, carries its own water supply—you arrive at the fire ready to work, without delay.

The FMC unit is a complete package, fully backed by the manufacturer. You get the famous patented FMC fog fire gun, the special high-pressure fire pump, the Bean never-fail pump drive, the patented Bean coupling, and extra-heavy-duty high-pressure hose.

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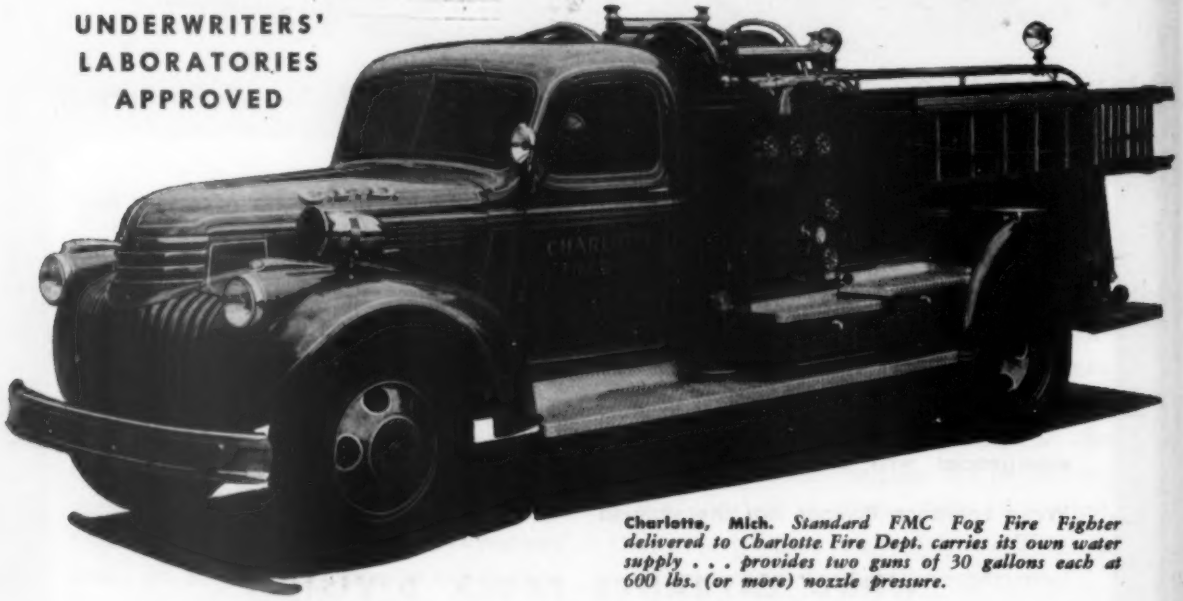

Charlotte, Mich. *Standard FMC Fog Fire Fighter delivered to Charlotte Fire Dept. carries its own water supply . . . provides two guns of 30 gallons each at 600 lbs. (or more) nozzle pressure.*

FMC *Original* HIGH-PRESSURE FOG FIRE FIGHTER

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That's why so many cities choose sturdy BWH Fire Hose! Built to take high pressures, yet amazingly compact, its tight-woven jacket is "welded" to the handmade tube with steam for perfect adhesion.

Perfect accessories for BWH Fire Hose are the top-quality nozzles, couplings, and other brass fittings made in the BWH foundry. They're machined to exacting specifications for dependable service.

Specify BWH Fire Hose, it's made by the originators of modern cotton rubber-lined hose.

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Protects Life - Home - Business and Income.

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FIRE ENGINEERING

OCTOBER, 1946 VOL. 99, NO. 10

With the Editor

Training Tackles New Techniques

Since the war much has been said and written about applying to the municipal fire service the practical fire defense training so successfully employed by the Navy.

Inspired by then Lieutenant-Commander (later Captain) Harold Burke, USNR, the idea of giving rookie and seasoned firemen first-hand experience in extinguishing actual fires on the fire ground, is taking hold in municipal fire departments and fire service training schools and colleges. By extinguishing real fires we do not mean the heretofore miniature demonstrations staged by manufacturers' representatives or imitations of the real thing on the drill ground.

Of late years the International Association of Fire Chiefs has been tending toward such improved practices. At the Boston convention, it will be recalled, full sized tests of bomb extinguishing agents were held. In Grand Rapids, there was a dramatic large scale demonstration of magnesium fire fighting and in Cleveland, last month, a feature of the conference was the out-of-door session in which fairly large scale oil fires were extinguished by subsurface application of foam.

States, too, are adding practical fire-ground exhibitions and demonstrations to their lecture curriculae. In Lewistown, Pa., for example, this year's Pennsylvania Fire School program included extensive, practical field operations in fire fighting, wherein every enrollee worked on actual Class "A" and Class "B" fires. At last year's meeting of the New Hampshire fire chiefs in Nashua, N. H., local firemen put on working demonstrations of the use of fog nozzles for the visitors.

Now the counties have picked it up. What is believed to be the first extensive effort at county wide training in both lecture room and in the field was held last month by Westchester County fire fighters under the sponsorship of the Fire Chiefs' Emergency Plan.

Other counties, states and divisional sections of the International Association of Fire Chiefs are revising their educational programs and practices to include this practical improvement in firemanship training. All of which is as it should be.

Of course this training technique is not always easy or possible. Public and private funds for such training are not readily available. It isn't going to be easy to accomplish with limited funds what the Navy did with almost unlimited government wartime budgets. Nor can manufacturers of apparatus and equipment shoulder the burden. They are already laboring under enough handicaps without being called upon to donate large sums for participation in such advanced educational work. Nor, likewise, have the fire service associations and groups the necessary wherewithall.

Here would seem a very worthwhile post-war project for the federal government, and one that should produce good dividends for the small investment necessary. Even if the federal government will not or cannot foster such a development, states and counties may possibly do so. The State of Maryland, through its University, is setting an excellent example. Connecticut appears receptive to the idea. Illinois, Indiana and Oklahoma have become fire training conscious. Other states are waiting to be shown.

Let's get action on this essential post-war development!

Fred Sheppard

Learning By Doing As Well As By Instruction Gains Ground

Is It Time To Re-evaluate Our Firemen Training Technique? Many Believe So

Editor's note: Many current factors focus attention on the importance of education and training in our present and future fire service. Among these are: (1) growing fire losses (2) new fire hazards (3) post-war rehabilitation and readjustment of the fire service (4) new personnel entering the fire service (5) return of service men who have received training in firemanship (6) changed working conditions in the fire service (7) the marked increase in promotional examinations and tests (8) wide application of Civil Service (9) increasing government state and municipal cooperation in vocational training and (10) the emphasis on improved training placed in educational programs of fire service organizations.

Not a few students of firemanship place this requisite of modern fire training at the top of the postwar needs of the fire service. They generally agree that upon the efficiency and ability of the nation's fire-fighters depends the success or failure of the country's fire protection and prevention programs. True, more and better fire-fighting equipment is needed generally throughout the fire service; and there is need of a greater consciousness of and appreciation of the seriousness of the problems facing the fire service by the general public and those officials responsible for the maintenance of our fire services; but it is to manpower—trained and equipped that we must look for tangible results.

This article cannot hope to explore the entire field of training in the limited space available. At best, the author hopes to create in the minds of those in the fire service and through it, in the consciousness of those responsible for its progressive development, an appreciation of the importance of overhauling and adjusting pre-war training policies, programs and procedures, to bring them into line with the other important developments in the post-war fire service.

ON Saturday, September 14 last, a 1,200 gallon gasoline tanker truck was driven under its own power onto a huge parking plaza adjacent to the Westchester County Center, White Plains, N. Y.

Thirty minutes later the truck was in flames from cab to manifolds with blazing gasoline flowing on the ground. In less than three minutes more the fire was out—extinguished by two crews of firemen who had never before operated on such a fire, using high and low velocity water fog, while another 1,300 firemen, and again as many citizens and public officials, applauded the fire-fighters' efforts.

All this was part of the dramatic final session of the First Annual Firemen's Training Institute of Westchester County, sponsored and conducted by the Fire Chiefs' Emergency Plan—an all-day demonstration and exhibition of fire extinguishing methods and equipment high-spotted by large-scale fire-fighting engaged in by firemen from the county's 200 and more paid and volunteer companies.

In a number of respects this county program marked a new high in the development of the nation's fire service educational training. It was not only the first *countywide* affair of its kind, in which indoor education was combined with large-scale field fire-fighting, but it was possibly the largest such enterprise thus far undertaken by any national, regional, state or other body, with an attendance of almost twice that of the celebrated Memphis Conference.

The Navy Set the Stage for Teaching by Doing

The Navy trained 2,500,000 men in fundamental fire fighting by setting fires in simulated ship sections and making tars put them out, using every type of extinguishing agent. This procedure has already been adopted with great success by municipal fire departments.

Of course not even the most sanguine observers at this Institute considered it a second Fire Department Instructors' Conference. It was not even a partial substitute for the famous Southern sessions that have made history in promoting nationwide firemanship instruction and training. They point out, however, that the Westchester Emergency Plan's program, although local in extent and possessing other limitations, does provide convincing proof that teaching by doing can be combined with teaching by telling on a large scale. Furthermore, they assert, such a program, properly planned, publicized and executed, not only benefits the fire service of the area concerned, but has a salutory effect upon the civil and other officials responsible for the welfare of the fire service, and fully as important, upon the taxpayers who foot the bills.

Experienced observers who witnessed the Westchester Institute's three day "telling-and-doing" instructional program, and could measure it against equally first-hand knowledge of other educational and training firemanship programs, are inclined to believe that it offers proof that the practical, field fire-fighting training, as developed by the Navy under Captain Harold J. Burke, USNR (now Deputy Chief-in-Charge, Bronx, New York Fire Department), can satisfactorily be carried out on the county level as well as state and higher levels.

Certainly this latest successful experiment, coupled with the efforts at field fire fighting at the Pennsylvania Fire School (described in the September FIRE ENGINEERING); the practical "working" demonstrations conducted at the August convention of the International Association of Fire Chiefs, and the more recent Timmins, Ontario, conference of the Dominion Association of Fire Chiefs—not to overlook the outstanding work of New Haven and other municipal fire departments—raise the question "isn't it time to review the nation's fire service training plans and programs and to re-evaluate them against the background of wartime training-by-doing and of tomorrow's training requirements?

Any such re-appraisal and re-evaluation of fire service training might well begin with the very inception of what we know as "firemen's training."

Training's "Growing Pains"

There wasn't much effort to "fit the fireman for his job" prior to the days of the horse-drawn apparatus because the fireman's "job" wasn't much of anything but parades, tournaments and social affairs.

With the coming of the paid depart-

ments the job began to assume some importance, and so did the fireman. The steam fire engine could not be left to the jack-of-all-trades and the neophyte. It became necessary to train "engineers of steamer." Not everybody could drive the three horse-hitch hauling ten tons of unwieldy Juggernaut through cobbled metropolitan streets. So drivers, like engineers, had to be schooled, and they rated a bit above the ordinary rank-and-file.

As fire department tools and equipment took on greater number and diversity, and their uses became more complex, it became necessary to instruct and train personnel in their operation and application. So, too, was it necessary for firemen to bone up on the legal aspects of their job and the department "rules and regulations".

All of this spelled "instruction" . . . "training" . . . "firemanship education" in the fire service.

Thus in 1869 soon after the organization of the paid department in New York City, the Board of Commissioners established the first program for organized instruction of officers of the department and caused a "Manual of Instructions for Commanding Officers of Engine and Hook & Ladder Companies" to be prepared.

The first "School of Instruction" formally established in this country was created in the New York Fire Department by General Order 4, issued June 7, 1883 and was prompted by the introduction into the department of the first scaling ladders, called the Hoell Life Saving Appliance, the inventor of which, Chris Hoell of Saint Louis, was engaged by the department to instruct personnel in its use.

The School, which was originally located in the quarters of Engine Company 47 was divided into two classes: The first, or "Life Saving Corps," devoted to instruction and training in handling and use of scaling and ordinary ladders, etc. and the second class to general instruction in the practical duties of a fireman at fires, in quarters, etc. Out-of-door drills were held at an old "sugar warehouse" at the foot of West 158th street, Manhattan, until the completion of the new Headquarters Building on East 67th street. At that time the School of Instruction located there (on January 1, 1887). In May, 1888 the departments "Company School" was officially established and located at the new Headquarters.

As the fireman's job continued to grow more in stature and "brain matter" began to be recognized as as important as "brawn," the first fire college in the country was created in New York. This was on January 1, 1911. It was composed of the following: The Officers' School; Engineers' School; Probationary Firemens' School and the Company School. It was directed by a "College Board" headed by Chief of Department Edward F. Croker, with then Deputy Chief (later Chief) John Kenlon in charge of the Officers' and Engineers' Schools. The College was originally located in the quarters of Engine Company 40 on West 68th street, later being moved to the Long Island City Fire Department Shops and College Building, as it was—and is known. When the shops are installed in their new building, now under construction, the College also will be located there.

As the nation's greatest metropolis, what the New York Fire Department did in education and training of personnel was widely emulated by fire forces throughout the country. Many fire departments sent representatives to New York to study its training methods and these in turn, taught its evolutions and fire fighting strategy to their local firemen. By 1911, drill towers of sorts were being erected in many fire departments but fire colleges, per se were few and far between and largely confined to the major municipalities. The idea of applying the principles of state and regional vocational training to the field of fire protection was as yet unexplored, although some progress was being made.

Photo Courtesy New Haven Fire Department

Fire Chiefs Initiated Into New Technique of "Training-by-Doing"

Demonstrating before scores of visiting fire chiefs, members of the New Haven Fire Department under Chief Paul Heinz and Deputy Chief Thomas Collins extinguish a hot Class B fire, using two 1½-inch handlines with fog nozzles. Training in large-scale fire fighting is a regular routine with New Haven firemen.

In 1911 the inspection of buildings was undertaken by the New York Fire Department and in 1920 the department published a book dealing with some of the fundamental problems affecting the fire service. This was said to be one of the first comprehensive publications on the subject of firemanship.

About 1925 and 1926 some state colleges and universities conceived the idea of conducting short courses for firemen. On the Pacific Coast, as early as 1919, Chief Tom Graham of the Corvallis, Oregon, Fire Department succeeded in having Oregon State College assist the Corvallis department conduct a school in firemanship. However little progress was made in developing state vocational training in the fire service for some years.

The question of educating and training firemen, meanwhile, had been receiving more and more attention by the members of the International Association of Fire Chiefs, which was organized in 1873, but it was not until 1929 that a concrete training plan was adopted by the Association (at the Birmingham, Ala., convention). This called for the inauguration of fire colleges throughout the nation under the jurisdiction of the I.A.F.C.

In 1930 Chief Ralph Scott, then President, developed a regional plan whereby each of eight regions would conduct a fire college training course in its own respective district. The idea was to train fire department leaders who were to be sent to the fire colleges from their respective fire departments for an intensified three months training program. The graduates of these fire colleges were then to return to their own fire departments, open local fire colleges, and instruct personnel relative to "new and modern" methods of fire protection, prevention and control.

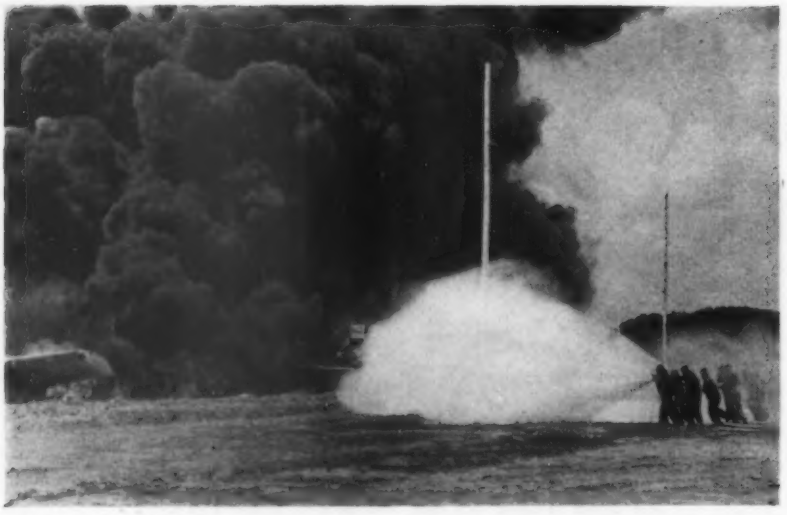
About this time, 1928 to be exact, a number of fire department instructors, appreciating the need of formalizing firemen's training and improving and standardizing fundamental evolutions and operations, got together and created the "Memphis Conference" now better known as the Fire Department Instructors' Conference. This "Conference" has been held almost every year since that time, with ever-growing attendance of persons prominent in fire protection and prevention, and ever-widening beneficial effects on the fire service.

A progressive step taken by the International Association of Fire Chiefs was to enlist the cooperation of the Federal Board of Vocational Education (U. S. Department of Education) in applying vocational training methods to firemanship instruction and in the all-important task of developing suitable teachers and trainers.

About the time this cooperation began to pay dividends came the national law known as the George-Dean Act, which made possible federal allotments of money to the several states having the means and machinery to administer it for educational advancement. Through this law it was possible for many states to add fire service training to the several other vocations desiring to take advantage of the opportunity to conduct in-service training.

Training May Have Cut Losses Following World War I

What part this impetus given improved fire service training had in stemming and reversing the upward trend of fire losses which took place shortly following World War I is problematical. That the turn upward to downward coincided with the first years' of serious fire training in this country is at least food for thought. Speaking of this reversal of trend, Chief Ralph Scott, re-



Army Air Force Fire Fighters Demonstrate Training by Doing

Feature of Westchester County's First Annual Firemen's Training Institute, sponsored by the Fire Chiefs' Emergency Plan, was large-scale extinguishing operations by volunteer and paid firemen, such as this test by Mitchel Field Aircrash Crew under Chief Milton Fisher, which knocked out large oil fires, using Cardox CO_2 truck in eight and six minutes.

porting for the Educational Committee of the I.A.F.C. before the 1939 Convention said: "Personally, I cannot conceive of any logical reason for this very favorable showing on the balance sheet (lowered fire losses) except the fact that fire departments are better than they formerly were; that the average member takes greater pride in his job, having more information as to how to conduct himself in it, and consequently has been worth more to his municipality. I conclude that the facts speak for themselves, and looking back of these facts for an explanation, I find that the fire service educational program and all that goes with it constitutes the most valid reason for the present (downward) trend."

Developing "Teacher-Trainers"

Another forward step in the advancement of fire service educational training was the idea which originated with Chief Ralph Scott and, we believe was first put into practice through the Los Angeles Fire Department, to create capable "teacher-trainers."

Chief Scott, like many others, recognized a major weakness inherent in many fire service training programs—the scarcity of capable instructors. The trouble was not that available instructors was lacking in knowledge of firemanship, but that they were unable to successfully impart their knowledge to their students. Therefore Chief Scott sent selected men to California vocational colleges where they were taught the fundamentals of teaching. These men, once taught, in turn were instrumental in imparting those rudiments to other firemen who, in turn, became better instructors.

Teacher-training, as it is known, has been on the agenda of the majority of the colleges and schools holding firemanship courses in the past decade. Thousands of men have received from 18 to 80 hours or more of instruction in teaching principles. The number of firemen they in turn have instructed is legion.

Leading up to the period of World War II we find a few other factors contributing to improved training practices and programs. One of these was the natural desire of firemen to get ahead by knowing more about their job, and doing a better job. Another was the spirit of rivalry between personnel, and companies and departments, which stimulated tests for officer promotion. Still another was the increasing insistence by local authorities, insurance bodies and citizens, upon higher standards of fire protection. No fire department could long afford to ignore adverse newspaper or other publicity which reflected upon its efficiency and ability. Finally, the advent of Civil Service lent added stimulus to the need for better training. By improving the conditions under which competitive promotional examinations were held, Civil Service inspired more study which in turn inspired firemanship training.

And so we come to World War II. This conflict left its impact upon the fire service in a number of ways, but none more so than in the field of firemen's training.

The extent and decree of this impact may not be presently apparent to those of the fire service who seldom leave their own bailiwick, never attend fire association conventions and have only a headline-and-picture acquaintance with the journals of the fire service. To those who do get around and see and hear what is transpiring the war's repercussions are encountered on almost every hand throughout the fire service.

To these observant souls there is a relation between what is happening in all other phases of the science and business of fire control and fire prevention, and in the field of firemanship training. They see the new and complex problems of fire suppression and prevention which have grown out of the war, problems directly related to post-war readjustment, reconversion and rehabilitation — problems involving housing, labor unrest and strikes, shifting population and others which fill the daily press. These "wartime hangovers" are all playing their parts in the serious nation's fire waste and have their repercussions upon the fire service. And in the minds of advanced thinkers in the fire service, we can no more hope to cope with these problems with yesterday's methods, techniques and training practices than the service could hope to overcome the after-affects of World War I by sticking to the faithful old fire horse in the face of the growing use of gasoline-driven apparatus.

These students of the problem believe that in a chemical—and atomic age—which we are entering, the fire service cannot remain static. That goes for training as well as all other branches of firemanship. To them, there can be no question where firemanship education and training ultimately are going to take us. The only question is just how far, and how fast.

Some indication of the rate of progress has been the increase in teaching-by-doing, as already stated. Another clue that could be kept in mind is the extent and scope of the training given members of the Armed Forces and the actual fire fighting which many of them did during the war. Many of these rookie firemen fought larger fires, under more severe conditions than were ever encountered and even envisioned by civilian fire fighters on the home front. This was of course particularly true of Navy firefighters. Some of these men entered the Armed Forces from the ranks of civilian fire departments. Can it be doubted that their return to civilian duties, following such training, will not find them better fitted for leadership—as officers and instructors in the nation's fire forces?

It is interesting to note that at the Pennsylvania Fire School, described in last month's Fire Engineering, two of the instructors in the training-by doing program were former Navy fire-fighters. And when a scratch crew was recruited from the onlooking firemen at the Westchester Emergency Plan's Training Institute's field demonstrations to extinguish a raging oil fire, several were from the Armed Forces and one, who took charge of a stand-by crew, had fought aircrash fires for years with a California airbase crash crew.

No, the 100,000 or more civil firemen who learned fire fighting and discipline in the Army and Navy must be reckoned with. So, too, must the men who had never been municipal firemen, but who during the war received intensive training and perhaps served their time in airport, depot, Navy damage control and Coast Guard fire protection. And it might be well to remember that no municipality, no matter how large or rich, could have afforded to institute the type and kind of training received by members of the Armed Forces at the nine Navy Fire Defense Schools; the U. S. Coast Guard Fire Fighters' School at Fort McHenry under Commander Layman; the Army Fire Fighters' Schools, such as the Corps of Engineers at Fort Lewis, Washington, and the Marine Corps Fire Fighting Schools.

Nor could any state or other fire college afford to conduct the large-scale experiments and tests of fire extinguishing agents and methods sponsored by the Navy, in Findlay, Ohio, and at Edenton, N. C.

It might be well to briefly sum up the more important fundamentals of training received by these members of the Armed Forces:

Training in handling fires in volatile oils, gasoline, etc.

Training in first aid and rescue operations (use of respiratory and breathing equipment in particular).

Training in specialized fire protection, such as of airport and related installations.

Training in fire prevention; in the transportation, handling and storage of inflammables, munitions and explosives.

Training in the use of specialized fire extinguishing agents, water fog, foam of all types, fog-foam, CO^2, methyl bromide, etc.

Training in the use of improvised and extemporaneous fire fighting equipment and tools (on beachheads, aboard ship, etc.)

Training in how to teach (teaching-by-doing)—as well as teaching-by-telling.

Training in the value of coordination and cooperation of fire control units (in many seaboard cities the Coast Guard 'rolled' on first alarms to waterfront boxes, and fought fire alongside the municipal fire forces).

Training in the development of new fire extinguishing strategy (witness the tests at Fort McHenry of ship fire fighting, and those now being conducted on cargo fires in San Francisco.)

Uncle Sam paid big money for this education and instruction in fire protection. It paid off in results. As Chief Harold Burke has pointed out, lack of fire defense in the early days of World War II was so serious, with the great carriers Yorktown, Wasp and Lexington in rapid succession falling victims to fires, that had the losses continued their initial rate, the net results of the war might have materially changed our chances of ultimate victory. Then the Navy decided to teach its personnel to fight fire by actual expreience, discarding nearly all previous training practices and policies.

To this end the Navy built simulated ship's structures to an exact scale, using material that would resist fire. These structures, all of them faithful reproductions of ship interiors, with steel decks, floor plates, gratings, ladders and machinery, were flooded with diesel oil, primed with gasoline and ignited. The men were taught to go in and fight these fires "by the sweat of their brows"—fires usually far more severe than actual fires encountered at sea.

Sailors who were strangers to fire; who had never held a fire hose went into action. The results were amazing. Before V-J Day two and three-quarter million sailors had learned the rudiments of fire fighting. Subsequent fires were fought with a courage born of conviction and knowledge of the subject by men, who while not fully trained firemen, said Chief Burke, nevertheless had confidence in their equipment and in their ability to use that equipment intelligently and successfully. The result was our carriers and other combat ships were no longer sacrificed to fire.

Photo Courtesy New York Fire Department

New York Fire Lieutenants Go to Fire College

A class in New York City's Fire College, receive classroom instruction at the Long Island City College Building. Classroom is equipped with projection booth and all modern educational facilities.

This is the sort of practical, full-scale fire training that should be followed by the municipal fire services, according to Chief Burke and others close to the problem. Chief Burke, speaking at the Cleveland Convention of the I. A. F. C. said: "If actual fire fighting accomplished so much for so many in such a short time, what are the results to be achieved if municipal departments were to train all their recruits for 60 to 90 days along similar lines?" And he made this telling observation: "Tremendous strides have been made in science and industry in the past 50 years but fire department equipment, policy and methods have not maintained pace with these giants of the economic world. Two outstanding deficiencies in America's fire service today are antiquated training methods and obsolete or inadequate equipment. . . . Many of our fire departments have very fine training schools but unfortunately, with rare exceptions, rookie firemen never see fire or smell smoke during the training period."

In the opinion of Chief Burke concurred in by Chief Paul P. Heinz of New Haven and others who have inaugurated training-by-doing, it is possible with such instruction to reach a state of near perfection, teamwork and effectiveness that could not normally be attained in years of actual fire duty.

Photo Courtesy New Haven Fire Department

Municipal Fire Fighters Apply Navy "Training-by-Doing" Technique

New Haven firemen, directed by Chief Paul P. Heinz and Deputy Chief Thomas Collins knock out a blaze in the "Christmas Tree" (of Navy origin) using low velocity water fog and applicator.

What Tomorrow's Teaching by Doing Will Be Like

If Chief Burke and these other advocates of practical teaching by doing have their way, this is about what we might expect in municipal firemanship training:

A School of Instruction would be located on a site of low value in a section of the city where smoke nuisances would not be objectionable, preferably near a source of burnable waste.

(*Continued on page* 768)

WATER RESCUES, A COMMON TASK FOR FLORIDA FIRE DEPARTMENT

Orlando, Fla., Firemen Maintain Power Driven Boat and Diving Equipment

By Frank Gillooly

THE nation's fire service is today rendering such truly efficient service that the average citizen invariably thinks first of the fire department in almost any emergency.

People are indulging more and more in outdoor recreation and water sports, and accidents attendant upon such sports seem to be on the increase. In Florida, famed for its hundreds of interior lakes in addition to its salt water coastline, drownings have increased to the point where numerous fire departments have found it advantageous to expand their rescue and emergency squads to include a "rescue boat" and crew.

The rescue boat of the Orlando, Florida, Fire Department is an outstanding example. The boat and equipment, costing over $2,000.00, was donated to the City from funds raised by the Elks Club.

The boat is driven by a 7½ hp gasoline outboard motor. In addition, at the center it has a small 6 volt storage-battery operated motor-driven propeller used for slowly circulating around the scene of the drowning. On each side of the boat is a powerful electric searchlight with adjustable bracket for focusing down into the water. At the middle of the boat are two plate glass panels in the bottom for looking down into the water; and over them is collapsible canvas hood to exclude daylight. Other equipment comprises the E. & J. Resuscitator, stretchers and blankets, chemical hot pads, a diving hood with 100 ft. of hose and hand operated pump, and two Scott Air-Paks. Most underwater operations are performed with the Scott Air-Pak.

Two recent typical operations of this squad are of interest. On July 30 a call was received from the City of Lake Wales for aid in recovering the bodies of two aviators who had crashed into a lake. The Orlando Rescue Squad with their rescue boats made the trip of 63½ miles in a driving rain and had the bodies out of the water in exactly 1 hour and 40 minutes after receipt of the call. The bodies were badly entangled in the plane wreckage under 20 feet of water, yet only 13 minutes were required by the two crewmen using the Scott Air-Pak to bring both bodies to the surface.

On August 6, a call was received from Zellwood, 23 miles away. Despite difficulties in getting to the water, in 1 hour and 11 minutes from receipt of the call the body was recovered.

Chief M. G. Bennett, of the Orlando Fire Department, constantly drills his men in the use of this equipment. The rescue boat is stationed in Fire Headquarter on a trailer, with quick-hitch device for immediate attachment to the first-out truck, so that no time is lost in responding to a call.

Chief Bennett has a fund of experience in this work, and would be happy to communicate with any Department contemplating inauguration of similar equipment.

1—Retrieving rescue boat from the water after Lake Wales rescue during heavy rain storm. 2—Attaching boat to fire truck for return home. 3—The rescue crew, showing the two men in bathing suits, who recovered the bodies. 4—Rescue boat attached to fire truck ready for the 63-mile return trip to the station.

WESTCHESTER COUNTY HOLDS NOVEL TRAINING INSTITUTE

Outdoor Demonstrations Provide Opportunity for Delegates To Gain Experience in Controlling Fires

WESTCHESTER County, which boasts one of the largest and most progressive mutual aid organizations, the Fire Chiefs' Emergency Plan, held its First Annual Firemen's Training Institute, September 12-13-14, with a record-breaking attendance of fire officers and advanced firemen.

The Institute was created "to advance the science of fire control and extinguishment for the benefit of the fire service of Westchester County, under sponsorship of the Fire Chiefs' Emergency Plan of that County."

The training program included indoor lecture sessions on two evenings, September 12 and 13, with displays and exhibits of fire fighting apparatus and equipment, and almost a full day of actual fire fighting, using all the latest extinguishing agents and equipment on full-scale fires.

Attendance at the lecture sessions was approximately 1,000 with 1,200 firemen and several times that number of citizens, participating in, or witnessing the field tests on Saturday, the 14th.

Speakers at the two-day indoor sessions, held at the spacious White Plains High School Auditorium, and their topics were: Fred Shepperd, Editor, FIRE ENGINEERING: "Problems and Hazards Facing the Fire Service"; Calvin Lauber, Assistant Engineer, National Board of Fire Undewriters: "Fighting Aircraft Crash Fires"; Chief Paul P. Heinz of New Haven, who spoke on "Control of Fires Involving Liquefied Petroleum and Gases" also described in detail the new training methods inaugurated by his department. His address was illustrated by motion pictures.

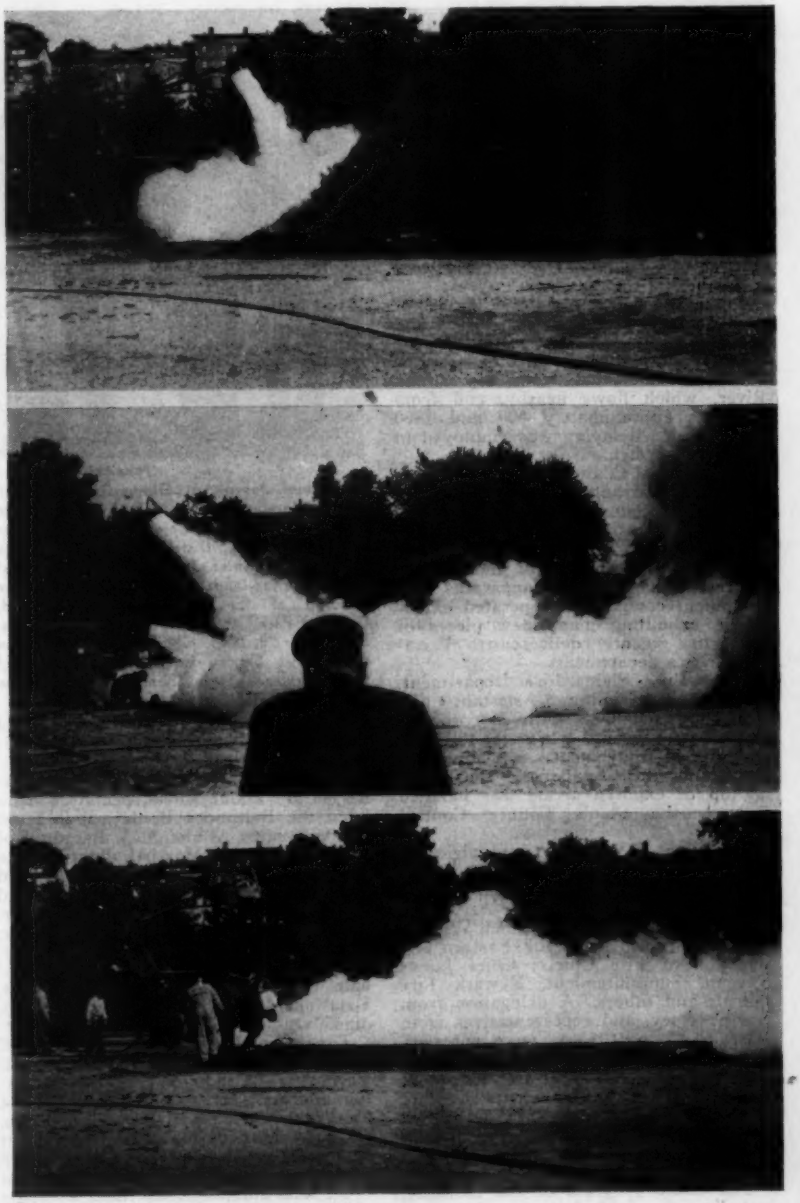
Chief George S. Lockhart, Minneapolis, spoke on "Safety Practices for Firemen"; Chief Irving Merrick, Poughkeepsie, N. Y., discussed "New Techniques in Fighting Dwelling Fires"; Retired Battalion Chief James Deasy, N. Y. F. D., handled the subject: "Size Up", while Acting Battalion Chief, Harry Irwin, Supervising Engineer, New York Fire Department, delivered a technical paper on "What Do You Know About Your Fire Apparatus?"

Session Devoted to Methods of Extinguishing Fire

Saturday's all-day session started with demonstrations of large capacity fog-nozzles, stream-shapers, newest types of aerial and other ladder trucks and standard and high pressure pumpers. A feature of the experiments in practical fire fighting was the ignition of a 1,200-gallon tank truck which was driven onto the field, then stripped of some of its more valuable parts, filled with oil and gasoline, and ignited. An installed tank above the tanker-body permitted a spray of gasoline to blanket the tank with flame and simulate a rupture with flowing fluid on the ground. This fire was extinguished in three minutes by two fire crews, one made up of paid and one volunteer firemen, only two men of which had ever held a fog nozzle.

Besides the tanker fire, a small trainer plane was ignited and the hot fire battled with fog and fog-foam. A pit 25 by 40 feet containing large quantities of oil floated on water, and primed by gasoline, was ignited and the fire extinguished by the Mitchel Field Cardox crash truck using CO^2 and foam, in eight seconds. In a later trial on a similar fire, the crew did the job in six seconds flat, using CO^2 alone. This force was under the command of Chief Milton Fisher, and operated under special permission of the United States Army Air Forces.

Other large scale pit fires were extinguished by crews of volunteer and paid firemen, directed by Deputy Chief Thomas Collins of the New Haven Fire Department, assisted by Hugh McNair and officers of the White Plains Fire Department, with Chief Paul Heinz giving a running account of events. Chief



Eight Seconds—and Fierce Fire Is CO²'d!

Firemen students of Westchester County's Fire Chiefs Emergency Plan Training Institute and astonished spectators see Mitchel Field aircrash squad under Chief Fisher knock out a large-scale pit oil fire, using Cardox crash truck, in eight seconds. Second fire was extinguished in six!

James Brennan of Larchmont was timekeeper.

Several large tiers of creosoted railway ties provided extremely hot fires to test the extinguishing properties of water-fog both high and low velocity, and high pressure fog. In addition, the New Haven Fire Department showed the effectiveness of 500 GPM fogheads when used on turret guns and ladder pipes. A single turret gun with 500 GPM Rockwood SG40 type nozzle knocked out one of the largest pit fires, operating from the moving turret truck of the New Haven Department in a matter of seconds.

The use of various types of masks, oxygen breathing devices and respiratory equipment was demonstrated in a large smoke house. Small scale spill fires were used to display the technique of employing hand extinguishers of all types.

New Haven's recently completed emergency truck, which mounts one of the "Old Loud Mouth" air amplifiers, was utilized by Chief Heinz and his aides in describing the various fire fighting operations and giving directions throughout the field which measured almost two city blocks in extent. The value of air and electronic PA sysetms was attested in directing pumping operations, keeping the crowds under control, and aiding the fire fighters and in furthering the training.

Pumping apparatus from ten communities with ladder trucks, rescue and other units from various sections of the County, participated in the events. Water was drafted from the Bronx River, which flows nearby, and from hydrants approximately 600 and 1800 feet distant. Relaying was employed in the latter stretch.

The General Chairman of the Institute sessions and arrangement was Chief Roi Woolley, Assistant Editor of FIRE ENGINEERING. Former Chief and Commissioner, B. Richter Townsend of Hartsdale, is President of the "Plan". Representatives of the apparatus and equipment companies cooperated extensively, exhibiting many new pieces of apparatus recently delivered to Westchester fire departments.

The White Plains Fire Department, Chief Abbott Griffin and Assistant Chief Edward Macdonald, with a corps of aides, was in general charge for the City, while the movement of apparatus throughout the County, and the covering up of exposed areas, was handled through the Plan's County Control Center.

Many out-of-town fire and civic officials attended, including a large delegation from New Jersey, headed by former president of the I. A. F. C., Chief Andrew Callahan; Chief William Wandras, president of the Eastern Association of Fire Chiefs; Chief James Keegan, Superintendent, Newark Fire Patrol; and others. A delegation from North Jersey, and representatives from Nassau County also were present. From New York City came Chiefs Harold Burke, Daniel Deasy, Theodore Beliakoff, Harry Irwin; Former Captain of Rescue No. 1, Raymond Milner now Lieutenant Commander, USNR, in charge of the Philadelphia Navy Yard's fire school, and many other officers.

The entire program of the Institute, including the field demonstrations and tests, was financed by the Fire Chiefs' Emergency Plan without county or other financial aid.

NEW FIRE SERVICE BUILDING DEDICATED AT MARYLAND SCHOOL

Gala Ceremonies Mark Opening of Structure Considered "Last Word" in Fire Service Training

By Irving W. Johnson

THE University of Maryland's new $160,000 Fire Service Building at College Park, Maryland, was dedicated September 28, in ceremonies on the campus, including a parade of 131 fire units from 20 Maryland counties and adjacent areas in Virginia and Pennsylvania.

Photo by L. Schoene, Jr.

Fire Chief Joseph A. Giammatteo of Glen Echo, Maryland, Director of the Eastern Association of Fire Chiefs; Chief Engineer Clement Murphy, District of Columbia Fire Department; Chief John M. Brown of Seat Pleasant, Maryland, at the New Fire Service Building of the University of Maryland, College Park, at the Dedication Exercises, September 28, 1946. Chief Brown Is Chairman of the Fire Service Extension Committee of the Maryland State Firemen's Association

The parade of fire apparatus was witnessed by about 4,000 spectators who lined the Baltimore Boulevard in front of the campus. Chief A. J. Bargagni of Bethesda, Parade Marshal, described the parade as one of the largest ever held in Maryland. In the reviewing stand was Governor Herbert R. O'Conor, Dr. H. C. Byrd, President of the University, Judge William P. Cole, Comptroller J. Millard Tawes, Representative Lansdale G. Sasscer and many Maryland, Delaware and Washington, D. C., fire officials.

The dedication ceremonies were held in the Ritchie Coliseum with Richard E. Vernor of Chicago making the dedication address. Mr. Vernor is Manager of the Western Actuarial Bureau, Chicago, and Chairman of the Fire Department Instructors Conference. Speaking to 2,000 firemen and guests, he said that "Fire kills annually four times as many children as the dread disease polio—the Nation's fire loss is mounting and new methods must be found to combat the rise."

Governor O'Conor greeted the firemen on behalf of the State. He stated, "State funds could not have been put to a better purpose. This building is Maryland's recognition of what Volunteer Firemen have done and are doing."

Dr. H. C. Byrd stated that the new building was one of the first constructed under the program of the State's Post War Committee on Building Construction and thanked the Committee Chairman E. Brooke Lee of Silver Spring for his interest on behalf of the firemen and the University. Other speakers included Representative Sasscer; W. Bartgis Storm of Frederick, President of the Maryland State Firemen's Association; Mrs. Mae R. Schoene of Ellicot City, President of the State Firemen's Ladies Auxiliary; Dr. Thomas G. Pullen, Superintendent of the Maryland Public School System; Colonel E. Brooke Lee, Comptroller J. Millard Tawes. Invocation was given by Rev. James M. Minter, Chaplain, State Firemen's Assn. Judge William P. Cole, Jr., Chairman of the Board of Regents of the University, presided.

Past President Phil Ryan of the State Firemen's Assn., presented a gold badge to Chief James W. Just, Director of the Fire Service Extension on behalf of the 240 firemen who attended the short course given at the University in September.

Chief Bargagni presented his parade trophy to the Independent Hose Company of Frederick (the oldest fire company in Maryland) for the best appearance in the parade. Cash prizes amounting to $600 were awarded to the following companies by Chief Eugene J. C. Raney of Kensington, chairman of the Parade Committee:

For the largest number of uniformed firemen in parade, with band or bugle corps, the Independent Hose Company of Frederick and the Silver Spring Volunteer Fire Dept. split the prize of $140, each having 82 men in line.

For the largest number of uniformed firemen in parade, without a band, first prize of $65, went to Conemaugh, Pa., and second prize of $30 to Laurel, Md.

For the best appearing Ladies Auxiliary, first prize of $35 went to the Independent of Frederick, second prize of $15 to Reisterstown.

For the best appearing Drum Corps, first prize of $50 went to Hampstead, represented by the Hanover, Pa., American Legion Drum and Bugle Corps, second prize of $20 to Leonardtown, represented by the Leonard Hall School.

For the best band, first prize of $50 to Lonaconing; second prize of $20 to Sharptown.

Best Comic Unit, first prize of $15 to Violetville, Second prize of $10 to Mt. Rainier.

To the Maryland Company coming the greatest distance, first prize of $35

to Westernport, second prize of $20 to Frostburg.

To the out-of-state Company coming the greatest distance, first prize of $40 to Conemaugh, Pa., (193 miles), second prize of $25 to Franconia, Va.

For the best appearing Rescue Squad, first prize of $20 to Bethesda-Chevy Chase, second prize $10 to the United Steam Engine Company of Frederick.

The parade consisted of 13 marching units, 5 ladies auxiliary units, 11 ambulances, 9 hook and ladder trucks, 83 pumpers, 3 rescue trucks, 1 flood light truck, 3 drum and bugle corps and 6 bands.

Parade Marshal Bargagni was assisted by Chief Karl A. Young of Mt. Rainier, Chief William J. Tierney of Hillside and Ted C. Gardner of Riverdale Hgts.

The registration and distribution of programs was under the direction of Chief John M. Brown of Seat Pleasant, aided by a staff of Prince Georges County Firemen. The reception committee was headed by Phil Ryan of Mount Rainier.

A demonstration of ladder and hose evolutions was given at the drill tower under the direction of Chief Just, assisted by Senior Instructor Curtis C. Larrimore. Taking part in the evolutions were members of the Hyattsville, Mt. Rainier and Cottage City Fire Depts. Earlier in the day a demonstration was presented by T. Lee Lankford, Maryland representative of the American-LaFrance-Foamite Corpn., featuring the Company's latest cab-ahead 750 gallon pumper and 100 foot aerial ladder truck with short wheel base.

Visitors in attendance were: Fire Chief Morgan of Wilmington, Del.; Chief Engineer Clement Murphy, and Supt. of Machinery O. E. Fearn, Washington, D. C. Fire Dept.; Herbert A. Friede, Supt. of Fire Alarm, Washington, D. C.; Dr. David Price, U. S. Department of Agriculture, Past-president of the National Fire Protection Assn.; Mayor Culler of Frederick; Chief Jesse A. Fisher of Annapolis, President of the Fire Chiefs Club of Maryland; Chief Joseph A. Giammatteo of Glen Echo, Director of the Eastern Assn. of Fire Chiefs; T. W. Venemann of Riverdale, former Chairman of the State Assn. Fire College Committee.

Also in attendance were 14 Past Presidents of the State Association, Wentz, Ford, Raney, Fisher, Simmel, Tawes, Culver, Shipley, Eckton, Ryan, Young, Duke, Fainter, and McNulty.

Later there was a buffet supper for the visiting firemen, followed by Maryland-Bainbridge Naval Training Center football game, which Maryland won 54 to 0.

History of D. C. Fire Department

A history with pictorial record of the Washington, D. C., Fire Department is being compiled by the Friendship Fire Assn. of Washington by permission of Fire Chief Clement Murphy. The association comprises a score of Washingtonians who are the red-hot fire fans of the nation's capital. The Friendships are making shots of stations, apparatus and men and delving into old records.

The Friendships have their own headquarters in Engine No. 1 at 1643 K Street, N. W. They were organized December 3, 1940, by the late Dr. Edward R. Gookin who had been a charter member of Boston's Box 52 Assn. He was president of the Friendships until his death two years ago. The present officers are: Lester H. Steinem, a lawyer, is Chief of the association; William D. Claudy, M.D., is Deputy; Roy A. Wiseman, safety engineer, is secretary and Edward B. Sonneborn, Fireman, Naval Medical Centre, at Bethesda is treasurer. The association's insignia is the replica of a fire mark of the Firemen's Insurance Co. of Baltimore. It is on page 86 of "American Fire Marks."

The name of the organization was taken from George Washington's fire company in Alexandria, Va.—Friendship Engine Co., organized in 1774. The Father of our country bought an engine in 1775 in Philadelphia, and it is now preserved in Baltimore. A full size replica is in the original Alexandria homestead now privately owned and opened on special occasions as a museum.

The latest acquisition by the District of Columbia Fire Department is a fireboat, which arrived during September from the Navy Yard at Norfolk. It is the "Mauquianna" a former YTB-225 which was commissioned Sept. 9, 1944, and cost the Navy $745,000. It was given to the District by the terms of a special bill approved by the President on August 9. The boat replaces the 41 year old Fire Fighter. The new fireboat is 112' long; 27'-3" beam; 10½' draft; 455 tons displacement; 12 knots; two 500 HP Diesel engines; two generators; two single stage centrifugal electric pumps of 2000 GPM each. Chief Murphy figures that the Fire Department will save a coal bill of $50 a week.

JERRY DALY

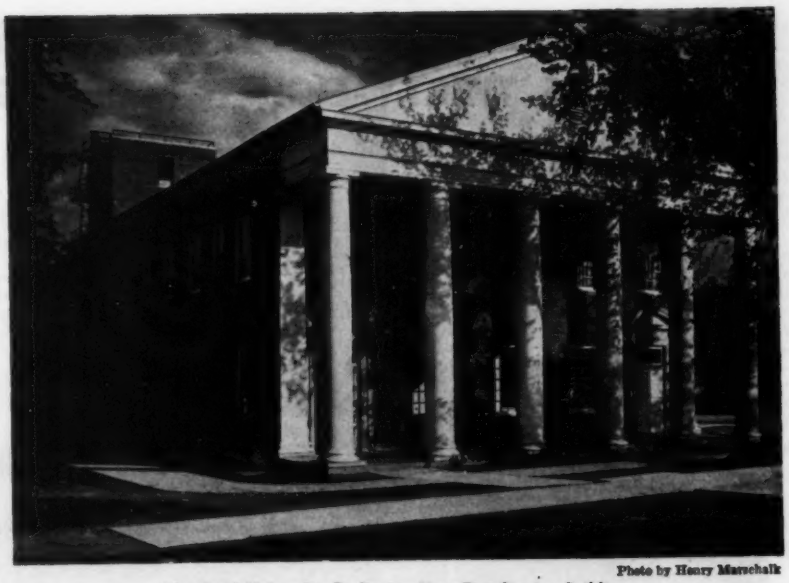


Photo by Henry Marschalk

Maryland University Dedicates New Fire Service Building

Beautiful new $160,000 Fire Service Building on the University Campus at College Park, Md., will further fire service training under ideal conditions.

Hose Becomes Flame Thrower

An accident with butadiene gas in Los Angeles provides a vivid illustration of what happens invisibly when there are cross connections between city water systems and pipe lines carrying contaminated water.

In making a pressure test on a butadiene line for leakage, the fire department connected a hose to a fire hydrant and tried to pump water into the section of the butadiene line which supposedly was valved off and under no pressure.

Actually, the butadiene was under 90 pounds of pressure, which was considerably higher than the pressure in the water system.

A check valve on the fire pump failed to hold and the butadiene gas traveled back through the water system. Almost immediately, flames were observed shooting out of the windows in a nearby house.

When the fire department hooked onto a neighboring fire hydrant to put out the flames, the fire hose became a flame thrower.

It was later ascertained that the gas had traveled back through the water pipes into the house, and had escaped into the bathroom through an open faucet. It was ignited by a nearby gas heater.

(E. W. W. IN U. S. PUB. HEALTH ENGR. ABSTRACTS, Aug., 1946)

New York Orders Apparatus

The City of New York has placed orders for, among other fire apparatus and equipment, forty fire department pumpers, divided equally between the American LaFrance-Foamite Corporation and the Mack Manufacturing Corporation.

All units are 750 GPM, standard types with semi-cab. They will have no rear-end windshield, but will carry complete equipment of scaling ladders, life nets, deck-pipe and other appliances.

Hose bodies will be divided to accommodate 1½ in., 2½ in. and 3 in. hose. Each pumper will be fitted with rear-end suction, and six subway-type hanging-straps.

In addition to these pumpers, the City has on order rescue units, motor cars for chief officers and other equipment.

DOMINION ASSOCIATION OF CHIEFS HAS THIRTY-EIGHTH MEETING

Interesting Conference Staged At Ontario Mining Town

THE Thirty-Eighth Annual Convention of the Dominion Association of Fire Chiefs was held in Timmins, Ontario, August 27 to 30th, with a large registration.

Meetings were held in the modern Municipal Building, next door to fire headquarters. Following the invocation, delivered by Reverend Father Murray, the visitors were welcomed by His Worship, Mayor J. E. Brunette and Alderman William Doran, Fire Commissioner, and members of the Municipal Council. Fire Chief William Stanley conveyed the welcome of the Timmins Fire Department.

Response to the welcomes was made by President, Chief W. J. Walsh, following which Secretary, Chief A. H. Clark read the list of the deceased members. The memorial address was delivered by Rev. William Mustard, after which the official photograph was taken and the members then paraded to the Cenotaph where a wreath was laid.

Following business sessions in the afternoon of the 27th, Chief Charles A. Delaney, President of the International Association of Fire Chiefs was introduced and spoke briefly, congratulating the Association upon its progress. Chief Daniel B. Tierney, Secretary of the I. A. F. C., also spoke of the related activities of the International and the Dominion Associations.

The closing feature of the day was the tournament put on by the Porcupine Firemen's Association at Buffalo Anchorite Beach. Members of the Porcupine, Schumacher, South Porcupine, Timmins Volunteer and Timmins Paid Departments, competed in hose laying and ladder races for attractive prizes. A buffet supper was served to the visitors in the grove after the awarding of the prizes.

On the following morning, the visitors were taken for a drive through the numerous mine properties in the Timmins area. Here are located some of the Dominion's greatest gold deposits.

The day's business sessions began with an address by E. L. Longmore, general manager, Hollinger Consolidated Gold Mines, Ltd. He was followed by Chief Roi B. Woolley, assistant editor, FIRE ENGINEERING, who spoke on post war problems in the fire service. In the afternoon the ladies of the convention were entertained at the famous McIntyre Community Building while the male members witnessed an out-of-doors demonstration of fire fighting in which a shack was burned and various oil fires extinguished by different methods.

Further business sessions continued the following day, with addresses by Chief DeFields of Windsor, Ont.; Ken Putnam, 3rd District vice-president Ontario Fire Fighters, Kitchener, Ont.; Chief T. Paveling, Fire Protection and Inspections, R. C. A. F. East York Township, Ont.; and Chief H. J. Lambert, Port Colborne, Ont. On this day the ladies were guests at a theatre party by Timmins Theatres, Ltd.

Over 1,000 persons attended the banquet held the evening of the 29th at McIntyre Community Building. The speakers were Mayor J. E. Brunette; Mr. E. J. Ennis, general manager, McIntyre Porcupine Mines, Ltd.; Chief and president W. J. Walsh; Commissioners Wm. J. Doran and W. L. Clairmont; F. X. Ahern, deputy fire commissioner, Quebec; Col. E. C. Reynolds; Mrs. Arthur Burch, president of the Women's Auxiliary and Chief Roi Woolley of FIRE ENGINEERING. During the course of the banquet a beautiful silver set was presented to Chief and Mrs. Stanley by the Association and Ladies Auxiliary. During the banquet there was a gymnastic display by the Viesti and Comet Athletic Clubs, with musical selections by special guests.

Convention Features Out-of-Door Demonstrations

Chief Daniel Tierney, Secretary-Treasurer, I. A. F. C.; Chief Roi Woolley, Assistant Editor, FIRE ENGINEERING, and Chief Charles G. Burnett of Ottawa, Ont., observe demonstration of Chemox self-generating oxygen breathing apparatus at the Timmins Convention of the Dominion Association of Fire Chiefs.

Election of Officers

The final session was given over to routine business, and the election of officers. The new slate for the year 1947 is: President, Chief Angus Mickie, Lachine, Quebec; first vice president,

Officers of the Dominion Association Entertain Prominent Guests

Left to right: Chief George Thomas, North Bay, Ont.; Chief Daniel B. Tierney, Secretary-Treasurer, International Association of Fire Chiefs, Arlington, Mass.; Chief Charles Delaney, President, International Association of Fire Chiefs, Lakewood, Ohio; Chief William Stanley, Timmins, Ont., host chief; President W. J. Walsh of Dominion Association; Vice-President (now President-Elect) Chief Angus Mickie. Lachine, Que., and First Vice-President-Elect Chief Harold Walton, New Toronto, Ont.

Members of the Dominion Association of Fire Chiefs in Convention at Timmins, Ontario, August 27-30, Photographed in Front of the Timmins Municipal Building

Chief Harold Walton, New Toronto, Ont.; second vice president, Chief Charles Vince, Guelph, Ont.; Secretary-Treasurer (re-elected), Chief Allan H. Clark, Lakefield, Ont.; Directors, Chief Robert Webb, Moose Jaw, Sask.; Chief R. Beaulieu, Quebec; H. B. Weed, Pyrene Mfg. Co., Toronto, Ont.; Chief T. H. Dumbill, Canadian Westinghouse, Hamilton, Ont., representing the industrial chiefs. Retiring president, Chief W. J. Walsh, Campbellton, N. B. retains his seat on the Board for another year.

NOVEL CALCULATOR DEVELOPED FOR SOLVING HYDRAULIC PROBLEMS

Simplifies the Solution of Many Problems Included in Fire Department Hydraulics

A SLIDE rule type calcu'ator has been designed by Sidney J. Graetz, a member of the New York City Fire Department, for solving hydraulic problems. The calculator is essentially a slide rule. Besides performing many of the operations of the conventional slide rule, such as multiplication, division, squares, square root, the scales are so constructed and arranged as to give automatically the relationship between gallons per minute, friction loss per 100 feet of hose, nozzle pressure, nozzle reaction and loss of head in taking suction with a 4½-inch suction hose.

In addition, the Graetz Calculator automatically converts pounds per square inch to inches of mercury, and to feet of head.

By means of the calculator it is possible to solve problems involving any or all of the above relationships with a single setting. For engine pressure problems, the only calculation that is necessary is a simple addition. This is also true where it is desired to reduce stretches of two or more different sizes or combinations to a single line of the same size hose.

Construction and Operation of the Graetz Calculator

The Graetz Calculator consists of four parts: 1. The envelope; 2. the opaque slide; 3. the transparent slide and 4. the movable cross-hair indicator.

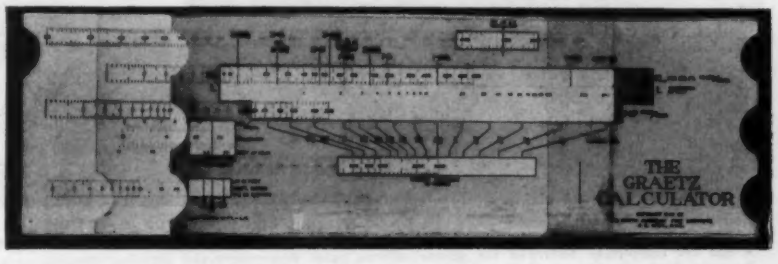
The front of the envelope is the space which is used in the actual operation of the calculator. The back merely contains relevant information (composite nozzles, formulae, constants, etc.). Transparent windows on the front of the envelope contain cross-hairs which indicate values for the various sizes and combinations of hose, size of nozzles, etc.

The opaque slide bears five scales. These scales are so constructed and arranged that when the slide is properly inserted in the envelope, they register in the windows marked gallons per minute, friction loss per 100 feet, nozzle pressure, nozzle reaction and loss of head in one, two and three lengths of 4½-inch suction hose. Six cross-hairs in these windows show correct values for all of the corresponding hose sizes and combinations, nozzle sizes and suction layouts for indicated gallons per minute.

The transparent slide bears four scales. These scales are so constructed and arranged that when the slide is properly inserted in the envelope they register in the windows marked length (in hundreds of feet) and conversion scale. The conversion scale is actually three scales, one above the other. These scales register inches of mercury, pounds per square inch and feet of head, and are so arranged that by means of the cross-hair any value on one scale is indicated in terms of its equivalent value on the scales above and below it. Thus pounds per square inch can be converted into feet of mercury or feet of head, and vice versa.

Some of the operations which can be performed by the Graetz Calculator are given in the table below. In the first column is indicated the information which is given, and in the second, the information which the calculator indicates.

Given:	Calculator will show:
Friction loss in 100 ft. of hose	Friction loss in any desired length.
Friction loss in long stretch	Friction loss in 100 feet.
Friction loss in given length and diameter	G.p.m. flow; nozzle pressure, nozzle reaction.
Friction loss in parallel lines	G.p.m. flow, nozzle pressure, nozzle reaction and loss of head in suction.
G.p.m. flow	Friction loss in 100 ft., friction loss in entire line.
G.p.m. flow and nozzle diameter	Nozzle pressure and nozzle reaction.
Flow in g.p.m.	Loss of head in 4½-in. suction.
Nozzle pressure and nozzle diameter	Friction loss in hose, discharge in g.p.m., nozzle reaction and loss of head in suction.
Nozzle diameter and nozzle reaction	Friction loss in hose line, nozzle pressure, g.p.m. discharge, and loss of head in suction hose.
Loss of head in 4½ - in. suction hose	Friction loss in hose line, nozzle pressure, flow in g.p.m., and nozzle reaction.
Suction lift in feet and the vacuum that the pumper can create	Maximum g.p.m. that can be lifted by the pumper.
Loss of pressure in suction hose	Friction loss in hose line attached to pumper.
Layout of hose, nozzle diam. and nozzle pressure	Engine pressure.
Layout of hose, engine pressure, nozzle diam.	Nozzle pressure.
Siamesed layout, E.P. and nozzle diam.	Nozzle pressure.
Siamesed layout, N.P. and nozzle diam.	Engine pressure.
Parallel lines of hose of different diameters	Relative carrying capacity of each.
Hose diam. and length	Equivalent length of hose of another diameter.



The Graetz Calculator

Complex hose layout	Equivalent length of single line of 2½-inch hose.
Inches of vacuum on suction gauge	Equivalent head in feet and equivalent in pounds per sq. in.

In addition to the above, the calculator can also be used for multiplication and division of numbers.

Mr. Graetz is connected with Engine 241, 280 Ocean Parkway, Brooklyn, N. Y.

International Fire Conference Meets in Paris

The International Technical Committee for the Prevention and Extinction of Fires, met in Paris, France, in August for the first time since the end of the war. This committee is similar to our International Association of Fire Chiefs and meets, or did meet, prior to the war periodically in various principal cities of Europe. Sixteen nations were represented at this first meeting. United States was represented by Major Clements of the Office of Public Safety, United States forces in Austria. Major Clements is stationed in Vienna and was formerly a Captain in Long Beach, California. This correspondent was not present at the meeting but spoke to Mr. William Seabrook, editor of *"Fire,"* the British equivalent to "FIRE ENGINEERING", about the meeting and Mr. Seabrook was high in his praise of Major Clements as was the rest of the assemblage. He went on to say that United States as well as Long Beach Fire Department should be proud to have a fire officer of such high technical caliber as Maj. Clements represent them. Mr. Seabrook said that the Major not only lectured in English but translated his own speech into French. The official French name of this Congress is "Comite' Technique International du Prevention et l'Extinction du Feu."

ARTHUR SELLECK

Sells Fire Department Steam

In Baltimore, Md., a contract has been negotiated between the city and the local gas and electric company under which steam from the fire department's high pressure pumping station will be purchased by the company for resale to its commercial heating customers. It is said the city will receive an estimated $20,000 annually for the steam.

Persons in the News

Patrick J. Walsh Dies

Patrick J. Walsh, 73, former Fire Commissioner and Chief of the New York Fire Department, died September 21 in Riverside Sanitarium, the Bronx. He had been ailing since his return from a visit to his native Eire last Summer. His death followed that of another former Fire Commissioner and Chief, John J. McElligott, by only fifteen days.

A staunch and rugged fire fighter of the old school, Chief Walsh never thoroughly relished the combined position of Commissioner and Chief to which he was appointed by former Mayor Fiorello LaGuardia, because he feared it would make a "desk man" of him.

Born in Ballydine, County Tipperary, Ireland, Walsh came to America in 1888. Here he was variously farmhand,

Forest Furniture Mfg. Co. Consumed by Fire

A hot fire completely destroyed the general offices, paint department and shipping department of the factory of the Forest Furniture Mfg. Co., on Redondo Blvd., Englewood, Calif., with loss estimated at $200,000. An adjoining wood mill was saved with slight damage. The pictures show the fire in various stages from the time the Department went into operation until the plant was fully involved.

deck-hand on a ferryboat and bartender in a saloon on the lower East side. Politicians persuaded him to enter the fire department, and on Dec. 10, 1901, he reported for duty at Engine Company 7, Manhattan. Early in the department he got the reputation that he

Patrick J. Walsh

"fought fires like killing snakes". He studied in off-hours the theory of firefighting and his advance in the department was rapid.

He was promoted to Engineer in 1905; to lieutenant in 1908; captain in 1910 and battalion chief in 1917. In 1922 he was made deputy chief and in 1924 was made assistant chief of department. After the retirement of Commissioner and Chief John McElligott in May 10, 1941 he was appointed to fill the latter's post. He retired, following the election of Mayor William O'Dwyer. Except for brief assignments in Brooklyn and Staten Island, his service was almost continuously on lower Manhattan.

The stocky, red-cheeked fire-fighter fought many large blazes in his colorful career, including the General Slocum steamboat disaster that took 1,021 lives in 1904, the Triangle Shirtwaist factory fire in 1911, in which 145 persons died. He also was one of the crew that went to the aid of Baltimore in 1904.

Won Bonner Medal

Although he won a number of high departmental awards, including the Bonner Medal (in 1914), he never bothered to tell the Department's Board of Merit about his exploits.

Four sons survive and of them the Commissioner once said: "I have two sons to keep me out of jail and two others to keep me out of hell." He was referring to State Supreme Court Justice Michael F. Walsh, former New York Secretary of State; the Very Rev. John B. Walsh, Order of Preachers, prior of St. Joseph's Priory, Somerset, Ohio; Joseph P. Walsh, associate counsel for the Sinclair Oil Company and the Rev. Paul Patrick Walsh, Order of Preachers, of the Southern Missions, Dominican Order, Columbia, S. C. He was married twice his first wife, the former Mary Ryan, died in 1935. Four years later he wedded her cousin, Miss Annie Connors, who survives, as does a daughter, Mother Mary F. Walsh and sister, Mrs. Alice Crummy.

Ex-Chief H. Ross Bridges Dies

Former Chief of the Athens, Tenn., Fire Department, H. Ross Bridges, 66, died early in September. He was appointed chief more than a score of years ago and was active in local and regional firemanic circles. During his administration, the city's fire losses were reduced to a minimum.

Chief Bridges was vice president of the National Firemen's Association and was prominent in Masonic circles. Members of the Athens Fire Department served as pall bearers during the Masonic services. He left a wife, and one sister.

Fire Chief John E. Held Succumbs

John E. Held, 55, for thirty years of the Alliance, O., Fire Department, died in August following a heart attack.

He joined the Alliance Fire Department in 1911 and in 1912 was made captain. In 1914 he was promoted to senior captain and in 1916 was advanced to chief of the department.

Under Chief Held's direction, the Alliance Department made noticeable progress. He was a member of the Kiwanis Club, the Ohio State Association of Fire Chiefs and the International Association of Fire Fighters. He leaves a widow, two sons, one a member of the department; four sisters, six brothers and three grandchildren.

Peter Becht of Rockwood Dies

Peter H. Becht, widely known and popular sales manager of the portable waterfog division of the Rockwood Sprinkler Company, and assigned to the Washington office, died August 28, 1946, in Post Graduate Hospital, New York City, after a month's illness.

Mr. Becht became associated with the sprinkler concern during the war and prior to that time was associated with the sales department of the Graton & Knight Company.

During the war, Mr. Becht supervised many Navy and Army war contracts, working out of the Washington office.

Funeral services were held in Union City, New Jersey.

Chief W. Cowden to Retire

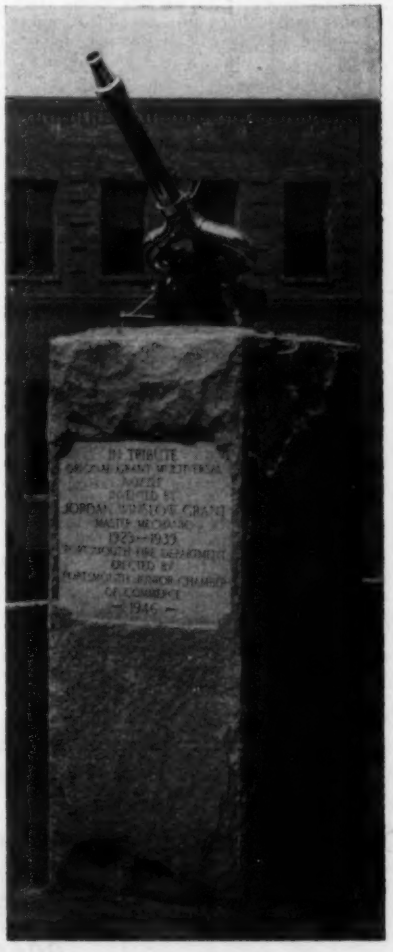
Chief William F. Cowden, of the Philadelphia, Pa., Bureau of Fire has reported that he will resign as Chief on January 1. He joined the Fire Department as a hoseman on April 16, 1907, became a lieutenant in 1913, was promoted to captain in 1917 and to battalion chief in 1929. His appointment as Chief Engineer was made on April 1, 1941. He would ordinarily have been scheduled for retirement upon reaching 65 last December, but under a ruling by the City Solicitor, employees of the Department of Public Safety who are over-age are being retained under the wartime emergency arrangement for at least six months after the official end of the war.

Monument to Jordan W. Grant

With appropriate ceremonies, an unusual monument to the life and achievements of Jordan W. Grant, Portsmouth, Va., inventor and for many years master mechanic of the Portsmouth Fire Department, was dedicated by the Junior Chamber of Commerce and formally presented to the City of Portsmouth in August.

The granite stone, weighing about seven tons, is surmounted by the chrome-plated Multiversal nozzle which Mr. Grant constructed while master mechanic in the fire department. It identifies him as the inventor of the Grant Multiversal Nozzle. The actual nozzle which surmounts the monolith was for many years in use on a local city service truck.

Principal speaker at the ceremonies was Sherwood Brockwell, North Carolina Fire Marshal and long time friend of the inventor. Many prominent guests also were in attendance, among them



Monument Recently Dedicated to the Memory of J. W. Grant

representatives of the Akron Brass Manufacturing Company, which manufactures Grant's creation. Tributes were read from that Company and Peter Pirsch & Sons and others.

Chief W. B. Sykes, head of the Portsmouth Fire Department, joined with Mayor Leslie T. Fox; Councilman Pearle J. Wilson, representing City Manager Arthur S. Owens; and Captain H. S. Hart, Chaplain of the department in eulogizing their late friend and comrade.

CAPT. K. L. HART

(*Continued on page 776*)

Short Cuts and Gadgets

LOW HANGING BRANCHES

Low hanging tree branches are a hazard to drivers of open fire trucks, particularly in the suburban and residential districts of municipalities, and many firemen have been injured by being struck by them.

In many municipalities local ordinances require property owners to trim trees at least fifteen feet above the curb line. In some communities maintaining volunteer fire departments, citizens, member of service clubs, Boy Scouts and others are asked to report low-hanging hazards to the fire department. (BWR)

* * *

CARRYING HOSE UNDER TRACKS

The idea isn't exactly new but contrib' Richard Adelman happens to be the first one to put it into writing and to him the reward. Here's his letter:

"A few days ago a three-alarm fire occurred in a lumber yard in a nearby city. The lumber shed was adjacent to the main line of a busy railroad and when the fire broke out, railroad service had to be suspended not only because of the proximity of the fire to the track but also because hose lines were stretched across them.

After the blaze was under control, a ditch about four or five inches deep was dug between the ties and under the rails. The hose lines needed were then brought through this ditch or cut, and railroad service restored to normalcy.

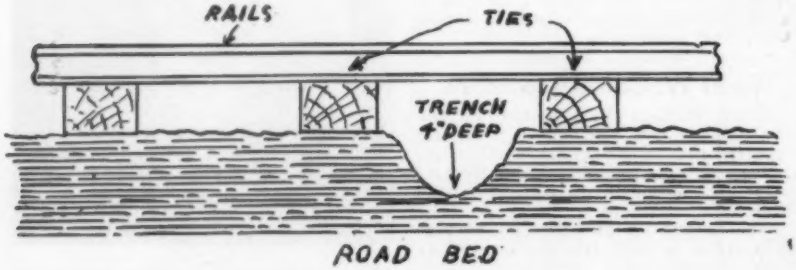
Other fire departments can also carry out this idea with little or no trouble. The only tools needed are a pick and pitchfork or shovel, which are almost always carried on the apparatus. In an emergency, when the tools are not available, a hose stream can be used to wash out the trench in the road bed."

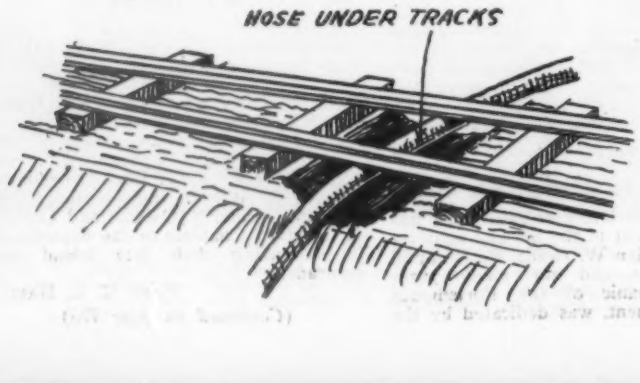
Editor's Note: In many cities, the railroads have cooperated with the fire departments to leave channels, or openings, between ties and under the rails of tracks for emergency use by the fire fighters. In some cases these are indicated by colored markings on the ties, or by small post indicators. Naturally, the openings are in approximately the best location to carry hose lines that might be needed for fires in hazards along the right-of-way.

* * *

WHAT'S YOUR GADGET?

At some time in his career almost every fireman has devised a "short cut" or a "gadget"—or both, for doing a job better, more quickly, cheaply or conveniently. It may be an operation like a formula for figuring back pressure or a finished products like an improved plaster hook—it doesn't matter what it is; if it will contribute to the advancement of fire fighting FIRE ENGINEERING wants it—and will pay for it at the rate of $1.00 for an idea without illustration and $5.00 where usable sketches or photographs are furnished. Address Editor "Short Cuts and Gadgets," FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.





The Old Timer Says

It's always a good plan for a fireman to remove all rings from the fingers when going into action. Many a smoke eater has lost all or parts of fingers by havin' his ring catch on a nail, or jam in a door.

Hot Springs Hotel Burns

Hotel fires continue to make the headlines, with the burning of the 75-room, 60-year old Great Northern Hotel in Hot Springs, Ark., early on the morning September 14. Three persons, were reported dead, seven others were injured and a number were listed as missing. The loss is estimated at $225,000.

Other businesses in the 4-story hotel, all destroyed, included two cafes, a drug store, electronic company, liquor store, cab company, barber shop, confectionery shop, news store and novelty shop. Adjoining the Great Northern to the north was the Terminal Hotel, which was quickly evacuated after the Great Northern became fully involved.

Destruction of the Great Northern's register made it difficult to determine the number of dead and injured. Forty to fifty guests were reported registered at the time of the fire and it was days before all guests could be accounted for.

Heroic work of firemen, a taxicab driver and the hotel night clerk are credited with preventing a much greater loss of life. The fire was discovered by a driver of the City Cab Company, which had an office on the first floor, and about the same time another Cab Company employe saw flames shooting from a number of rooms. The latter raced into the hotel, took an elevator to the top floor and aided several persons through corridors choked with smoke. Meanwhile, Edward Meneffe, a hotel porter, ran half a block to the central fire station and tried to locate the rope which sounds the fire alarm, but failed to find it. However, he created sufficient disturbance to arouse the firemen who responded quickly in charge of Assistant Chief George Sanders, Assistant Chief Riley Brown, and S. A. Akers, fire inspector. All local companies were called to the scene, but the fire was in almost full control of the ancient structure before they could get into operation.

Firemen took severe punishment, many being burned on the face and hands. The heat was so intense spectators were driven half a block away and a police car more than fifty yards from the burning building narrowly escaped being consumed, as did a fire truck, which became so hot from radiated heat that firemen, and the commissioner of public safety, Welson Rasberry burned their hands when they tried to move it by pushing, after its engine failed to start.

In less than thirty minutes the front wall of the hotel fell, carrying with it many overhead wires. Shortly after, the remaining walls caved in, reducing the structure to smoking rubble.

Firemen, using all available rescue facilities, saved nine persons, mostly via the department's longest ladder, which was raised at the rear of the structure. Many persons jumped from the lower stories.

Prosecuting Attorney Curtis Ridgeway and Commissioner Rasberry of Hot Springs are conducting a joint investigation into the origin of the fire.

The WATCH DESK

Overhauling the firemanic news of the day

By ROI B. WOOLLEY

Chief Foster Issues "Backhand" Invitation

Irked no end by the community curiosity seeker and sidewalk chief, Fire Chief G. A. Foster, of Lake Geneva, Wis., gave vent to his feelings in the following "invitation" published in the local newspaper:

"The Chief Urges You Not To Miss The Next Conflagration—

"The officers and members of the City Fire Department cordially extend an invitation to the public to attend the next fire. Ring-side seats will be available to early arrivals.

"If you drive your car to the scene of the fire, be sure to follow the fire truck as close as possible, or better still, get ahead of the truck (sometimes the firemen get their signals mixed) and you can direct them. When you arrive, park your car close to the hydrant, at least in the same block.

"In your enthusiasm and excitement, you may decide to give the firemen a hand and free advice and by so doing will get a kick out of it and may get a kick in the pants in return. The closer you can get to the fire, the better, as you will get a better view and will be able to hinder the firemen laying out the fire hose and raising ladders.

"When water is turned on and played upon the fire, you may get in range and get a good dousing, but this will cool you down and is part of the fun you are having.

"In order to find out how well you are enjoying the fire, firemen will pass the hat and take up a collection to defray expenses and add to their entertainment fund. We hope you will contribute liberally.

"Drivers of cars following the fire truck or parking too close to the fire may find a red ticket attached when they return which means a trip to the police station and a fine for the privilege they assumed. Well, you had your fun and should be willing to pay up.

"If the fire alarm sounds for a call outside the city limits, you are in for the biggest thrill of all, for you can race your car ahead of the fire truck or follow the procession and jam up the roads and make it difficult for the firemen to get to the fire scene, and start operations.

"This invitation is sent out because you so thoroughly enjoyed being present at the recent house fire and did such a good job of interference. The firemen hope you will be there for the next fire, for this will be the only invitation extended for some time to come."

Thanks Peter Pirsch & Sons Co.

* * *

The Face on the Firehouse Wall!

The old wheeze about the face on the barroom floor has nothing on the face on the firehouse wall. Ask the lads down at Station 1, Atlanta, if you want proof!

Seems that painters, clambering over the facade (the $9 word for 'face') of the firehouse building, in the August clean-up campaign, discovered the sculptured likeness of no less than W. R. Joyner, Atlanta's first fire chief, hidden under a coat of red paint.

The existence of the likeness of the chief, which has looked out over the City since 1892, when the building was built, came as a surprise to firemen who have been quartered at the station ten years or more.

A fire-eater of the old school, according to newspaper reports, Joyner lost only the visor of his cap, but none of his determined expression, during his recent years of obscurity. And we're told further, that in place of the red paint, painters have given W. R. a fashionable coat of grey.

* * *

More Serious Than Silly, This

From Bill Schwartz, New Jersey newsclipper, comes an editorial from a Lancaster, Pa., newspaper which is worth quoting 'as is':

"It Isn't Really Funny"

"Failure of a 22-year-old city fire truck to get going to the general alarm fire at the Y. M. C. A. early yesterday morning, until it was pushed into the street by a group of patrons of a cafe near the fire house, brought suggestions from interested citizens to solve the problem.

One suggested that the city officials see to it that there are cafes near every fire house, just in case more pushing must be done.

Another called to suggest that perhaps the time has come to go back to horses.

It isn't funny, of course.

The failure of just one piece of apparatus in a dilapidated department can make a lot of difference in property damage and lives on a general alarm fire."

And, parenthetically, we might add, on any kind of a fire! Incidentally, Lancaster, scene of this situation, has been getting a thorough going-over by underwriters, local committees and visiting firemen in the interest of correcting many long-standing flaws and faults in the local fire department—drawbacks which in no wise should be attributed to present-day Lancaster firemen.

* * *

Hearing Things!

Volunteer fireman Bela Koji, 23, of Jericho, L. I., thought he heard the local fire whistle as he sat in his home. He leaped into his car and dashed for the firehouse.

It was raining hard. Koji's car skidded and he wound up ferninst a pole (funny how there's always a pole or tree right where there shouldn't be!)

Koji's buddies hustled to the wreck of his car, took him to the fire station and then to Meadowbrook Hospital, suffering from a cerebral concussion and possible skull fracture.

Ironically enough, Bela's fast ride was in vain—the fire whistle had not been blowing! (Thanks J. K.)

* * *

Extra-Curricular Work Cut

In Newton, Mass., the "forgotten key" service which the local Brothers had been rendering cityfolk ended t'other day.

Fire officials said they had run up their last ladder for people who had forgotten or lost the keys to their apartments.

"However" they added, "If there's a child locked in the house, or in the bathroom, we'll still make the run."

Tell us seriously now fellers, how about it—suppose it was a nice, curvacious blonde wedged fast in the bathtub Wouldya, huh?

* * *

Practice What the Chief Preaches

In Lewistown, Pa., last month, Fire Chief A. Nelson Yearick's face acquired a reddish tint and more than 100 visiting firemen at the Penn State Fire School got a big kick out of an unscheduled demonstration of fire fighting.

While delivering a lecture at the Eighth Annual Pennsylvania Fire School on fire protection, so the wayward press relates, someone whispered from the wings "Chief, your car is on fire." More than 100 of the "students" dashed out to find out it was so!—that a short circuit had developed in the motor of the chief's sedan parked outside the high school building where the class sessions were being held.

Eager beavers applied some of the principles of their courses in putting out the blaze.

* * *

Teachers Will Smoke in School

The Somerville, N. J., Board of Education in September bowed to twentieth-century custom and voted 7 to 2 to permit female members of the local school faculties to smoke during rest periods, although it is said a State law prohibits all smoking in schools.

The Board president, Frederick I. Pelovitz and Mrs. Cyril Severin, the objecting members, said it was not proper for women to smoke in the schools, but the majority agreed to have special smoking rooms fitted out "with the approval of the Fire Department," which has regulations forbidding smoking in schools.

The lifting of the no-smoking ban will apply also to men teachers. It is expected that "fireproof and cozy little nooks down near the boiler rooms and coal bins of schools" will be selected for the smoking rooms, according to press reports.

Well, tempus does fugit! This oughta provide considerable provinder for truck house 'bull sessions'!

* * *

Hot Off the Tape

Mr. H. C. Clemons of Nashville, Tenn., had money to burn—and lost the shirt off his back burning it—a total of $1059 with shirt. Clemons, a produce merchant, said shirt and cash went up in flames as he struck a match to light a cigarette while talking to a customer. The lucre was in a pocket of the shirt. . . . The Geneva Township, Ohio, fire truck was damaged in a collision on U. S. Route 20 while heading for a fire. No fatalities to truck or auto which crashed into it. . . . While we're talking about apparatus crashes, police arrested Lawrence Hessinger, operator of a trolley in Columbus, charged with failing to yield the right of way to an emergency vehicle. A Columbus "quint" heading for an awning fire at the Pure Oil Co. struck the trolley car, knocking the front end from the tracks, injuring some of the 20 passengers but fortunately, no firemen. . . . One of the wayward press of Hartford, Conn., captioned an article in its Aug. 23 issue "City to Purchase Flash Fire Truck." That's a new one for the encyclopedia. . . .

Manufacturers' Announcements

General Detroit Corp. Opens New Office

The opening of a new Philadelphia office of The General Detroit Corp. and The General Pacific Corp. has been announced by E. A. Warren, Vice-President in Charge of Sales.

Elmer A. Marquardt

Elmer A. Marquardt has been appointed Zone Sales Manager in charge of the office which is located in Philadelphia at 1427 N. Broad Street.

Other branch offices are maintained in New York, Chicago, Dallas, Boston, Atlanta, Houston, Tulsa, St. Louis, Milwaukee, and Cleveland, as well as the home office in Detroit. The General Pacific Corp. serves the West Coast with offices in Los Angeles, San Francisco and Seattle.

Ward LaFrance Makes Changes

Appointment of Robert M. Clave as Executive Assistant, General Sales Department, Ward LaFrance Truck Division of Great American Industries, Inc., Elmira, New York, was recently announced by Wendell P. Rice, General Sales Manager.

He was formerly connected with Detroit Transmission Division of GM, Chrysler Corporation and Murray Body Corp.

Clinton W. Wiley has been promoted from Domestic Sales Manager to Distribution Manager of the Division. Wiley will control distribution of all products of the Division, both export and domestic, including commercial trucks, fire trucks, and trolley coaches. Wiley previously was with International Harvester Branch Office Sales Staff.

Nils J. Bjorck has been named Consulting Engineer for Fire Apparatus Sales.

Prior to his appointment in this capacity, Bjorck served as Acting Chief Engineer of the Division with which he became connected in 1936. He was formerly identified with Continental Motors and Chrysler Corporation.

Frank B. Powers, Vice President for Operations of Great American Industries, Inc., has announced the appointment of Guy V. Brown as Factory Manager of Ward LaFrance Truck Division, Elmira, N. Y.

Until this appointment, Brown was with McCord Corporation of Detroit as Executive Assistant to the President and before that with Chrysler Corporation for 20 years, last serving as Supervisor of Engineering Operations.

Appointment of John T. Shatagin as Chief Engineer of the Ward LaFrance Truck Division, Elmira, N. Y., was also announced.

Shatagin came to Ward LaFrance from Chevrolet where he was Design Engineer in the light car division. Previous to that, he was associated with Graham-Paige, Briggs, and Budd in similar capacities.

American-Marsh Pump

American-Marsh Pumps, Inc., Battle Creek, Mich. has issued new descriptive literature on its Duplex-Multistage Centrifugal Fire Pump, which describes the improvements and refinements and gives the various features of the unit.

Darley Issues Catalog

W. S. Darley & Company, 2810 Washington Boulevard, Chicago 12, Ill., has issued a twenty-four page booklet describing their Champion Fire Apparatus and Fire Pumps. Copies may be secured from the company at the above address.

Security Fire Equipment Co. Moves Offices

The Security Fire Equipment Co. has moved its offices from 1550 Princeton Avenue, Trenton, N. J., to 107 Factory, Street, Trenton, N. J.

Mathieson Alkali Enters Fire Protection Field

The Mathieson Alkali Works, Inc., 60 E. 42nd Street, New York City, has entered the fire protection field with both high and low pressure carbon dioxide equipment, it is announced by George W. Dolan, president of the company. Producer of heavy chemicals and chemical specialties, the company operates a large carbon dioxide plant at Saltville, Va.

Chas. T. Kongaker, Manager of Mathieson's carbon dioxide division, has named Harry Ensminger to head the fire protection department, with headquarters at the company's New York offices.

Specializing in built-in systems, Mathieson is said to be the only company offering both high and low pressure systems. Engineering service includes surveys of occupancies to determine fire protection requirements, plans for systems, and supervision of installation. Recharging facilities are reported to be available at sixteen distribution centers.

Harry Ensminger

Mr. Ensminger became affiliated with Mathieson in 1945. Prior to that time he was sales manager of the Electronics Division of Federal Telephone and Radio and before that was sales manager for the Cardox Corporation. He was also affiliated with the Safe Harbor Water Power Corporation, and Aluminum Company of America. Mr. Ensminger, active in fire protection work for many years, served as Chairman of the Fire Protection Industry in Manhattan during the fourth and fifth War Loan Drives.

High Capacity Jet Pump

For fire fighting applications where large quantities of water are desired, Derbyshire Machine & Tool Co., announces the new Accel-O-Rate Model 4-HH to augment the Model 2½.

The Model 4-HH delivers over 3 times as much fire fighting water at the tip as the Model 2½; operation is the

(*Continued on page 774*)

Robert M. Clave | Nils J. Bjorck | Guy V. Brown | Clinton W. Wiley | John T. Shatagin

FALSE ALARMS

Shrinking

A new recruit to the Fire Department, considerably overweight, determined to lose weight in his new job. In selecting his uniform, he picked one with pants big enough for energetic exercise. Then a thought struck him. "Wait a minute," he said to the clerk, "those fit me now but I expect to lose a lot—maybe I had better buy a smaller pair."

The clerk shook his head, calmly went on wrapping the suit.

"Mister, if you can shrink as fast as that suit will, you'll be doing pretty good."

He took her gently in his arms
And pressed her to his chest.
The lovely color left her face
And lodged upon his vest.

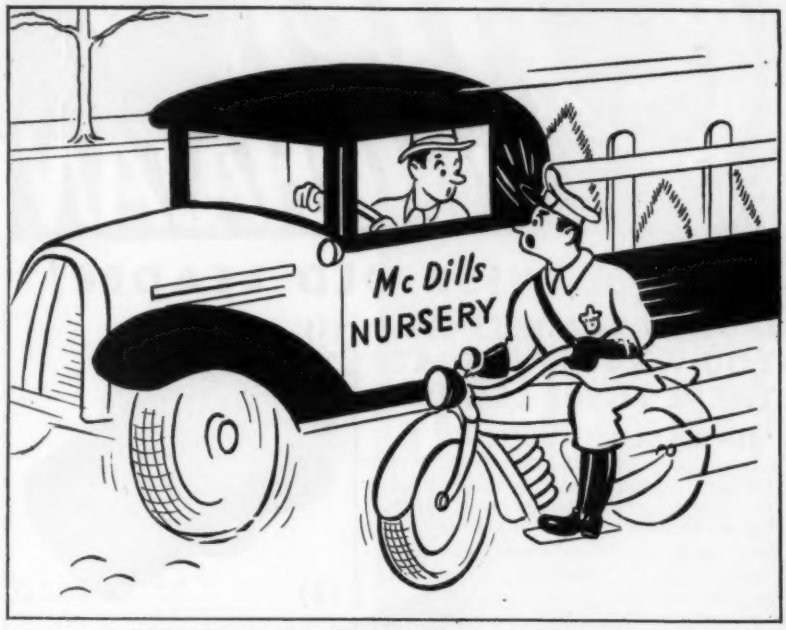
The good old days were those when there were 2 cars in every garage. Now, it's 2 families.—*Grit.*

The "lady" from the "big house," very much class-conscious, called on the "lady" of the "little house."

"We are troubled with rats at home," she said. "I suppose you are similarly bothered with mice?"

The honeymoon is over when the wife starts complaining about the noise her husband makes getting breakfast.

A hick town is where there is no place to go that you shouldn't.



"Where Do You Think You're Going? To a Forest Fire?"

An automobile is always as drunk as its driver.

Why be so conservative? Consider the turtle—he makes no progress unless he sticks his neck out.

"Sometimes I Think He Joined Up Just to Show His Skill at Poker!"

"Why do you regard Colonel Smathers as a gentleman?"

"Because I saw him coming out of a door that said so."

Manager's Wife: "I sent my husband to the hospital because of his knee."

Friend: "Did he have water on it?"

Manager's Wife: "No, his private secretary."

Mother to Susie: Why is your right shoe muddy and not your left?

Susie: I changed my mind.

We heard of a lucky man the other day. He has a wife and a cigaret lighter, and both of them work.

The judge leaned over the bench and asked:

"Your wife claims that she has found life with you unbearable. Have you anything to say?"

"Why, yes, your honor," the man answered, "It's the other way around. She insists on keeping a goat in our bedroom and I couldn't stand the atmosphere."

"Well," asked the judge, "couldn't you have opened a window?"

"What!" yelped the husband, "and let out all my pigeons!"

Corny

The copper's hip bulged,
The chief yelled, "Stop,"
And guess what he found?
Yep. Corn on the cop.

Chief POWHATAN

WAS A WISE OLD LEADER!

IF YOU ARE A WISE CHIEF YOU WILL INVESTIGATE THESE THREE LEADERS

"SENSIBLE LUG" COUPLING
PLATE 159

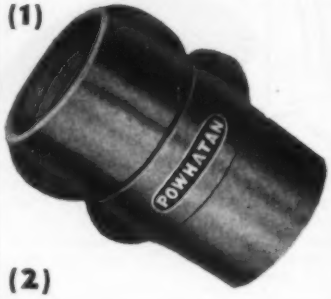
SENSIBLE in every sense of the word! Because they cannot catch in ladders, etc. SENSIBLE lugs are designed to glide over obstacles.

They cannot wear or mar stacked hose.

They are easier to couple up.

And they are made of sturdy brass.

(1)



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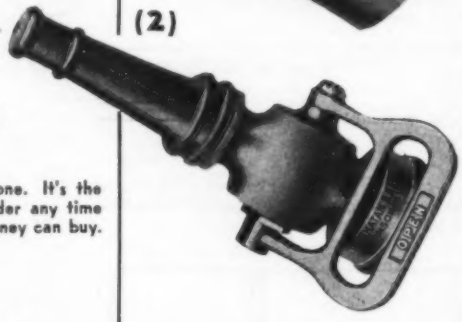
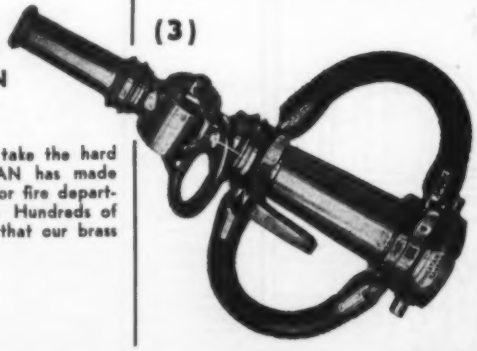


"SACHEM" LEADER LINE SHUT-OFF NOZZLE
PLATE 103A

Truly a leader in more ways than one. It's the one shut-off nozzle that you can order any time and rest assured of the best your money can buy.

(3)



PERFECT COMBINATION PLAY PIPE
PLATE 100

Comes in 2½" size and built to take the hard knocks. For 54 years POWHATAN has made brass goods of every description for fire departments in all parts of the country. Hundreds of fire chiefs can attest to the fact that our brass goods "stand the gaff".

Investigate POWHATAN.

POWHATAN BRASS and IRON WORKS
RANSON, WEST VIRGINIA
Phones 93 & 94 Charles Town West Virginia
Established 1892

Learning by Doing

(*Continued from page* 755)

This School of Instruction would contain much or all of the following:*

1. A lecture and administration building consisting of classrooms, dressing rooms, shower and toilet facilities, first aid, cafeteria and offices for instructors.

2. A fire building—to be the heart of the School. It should be of reinforced concrete suitably constructed to resist fire; comparable in height and area with the size of the city it serves. It should contain certain essentials common to all municipalities with respect to arrangement. Provision should be allowed for the duplication of the more common occupancies in which fires occur, i.e.: the structure should be arranged to simulate an apartment, business block, taxpayer, store, cellar, factory, etc. All the known avenues of vertical extension of fire should be included, such as dumbwaiters, vents, light and elevator shafts. Horizontal arteries for the spread of fire should be reproduced. Samples of each type fire escape should be provided, together with sectional installations of standpipe and sprinkler systems for instruction as well as windows and skylights (windows to contain light sheet metal or plastics in place of glass).

3. Water mains to be installed, with sample of each type of hydrant used in the community. Mains to be connected to a local pumping station or pump installation where it is necessary to give instruction in high pressure fire service. Facilities for drafting water to be furnished by a suction pump.

4. Construction of tanks 15 feet in diameter for instruction in the handling of oil and gasoline fires together with the preliminary instruction in the use of fog and fog-foam equipment.

5. Spare apparatus of the municipality (each type used to be assigned to the School.)

6. A full allowance of all sizes of hose, all types and sizes of ladders and all tools and equipment used by the department.

These facilities, augmented by competent instructors operating under a progressive curriculum, Chief Burke believes should produce instruction in any type of fire fighting under actual fire conditions. In his words "this would be the establishment of what might be termed a Fire Fighting Laboratory. Students should be rotated between engine and ladder company groups, each commanded by an instructor experienced in fighting fire."

This sort of training according to Chief Burke, is in line with the use of live ammunition in training troops under actual battle conditions during the last war. Such training minimizes casualties and secures objectives in record-breaking time. Not only would such training enable rookie firemen to know their jobs at the end of 90 days' period but such a policy would also provide an opportunity for all fire companies to keep abreast of the latest developments in fire fighting and fire control techniques through the use of refresher courses. An intensive course of instructions for newly appointed officers should be conducted to prepare them for the increased responsibilities of their new position. This curriculum should feature fire com-

*From the address by Chief Harold Burke before the I.A.F.C., Cleveland.

For Dependable and Economical FIRE PROTECTION

ASHLAND, WISCONSIN relys on AHRENS-FOX

M. P. VAN BUILDER, MAYOR
R. H. WIEZOREK, CLERK & COMPTROLLER
M. C. KAUSRUD, TREASURER
JOHN EGAN, ASSESSOR
J. W. DAY, ENGINEER
(MISS) EDITH M. WOODLAND, CITY NURSE
S. ARTHUR JOHNSON, CITY ATTORNEY
DR. C. A. GRAND, HEALTH COMMISSIONER
DR. J. M. DODD, SR., CITY PHYSICIAN
E. J. KENNELL, CHIEF OF POLICE
H. G. LUNDBERG, CHIEF OF FIRE DEPT.
(MISS) HAZEL ROY, DIRECTOR OF RELIEF

CITY OF ASHLAND
WISCONSIN

July 31, 1946

ASHLAND

GATEWAY to the Apostle Islands

BEST HARBOR on the Great Lakes

TERMINAL of Northwestern, Omaha, Northern Pacific, and Soo Railroads

MEETING POINT of Five State Highways

AGRICULTURAL and Dairy Center of Northern Wisconsin

ADJACENT to the Best Fishing and Hunting Grounds in the Northwest

A Friendly City

We Invite You

The Ahrens-Fox Fire Engine Corp.
4932 Beech Street
Cincinnati 12, Ohio

Dear Sir:

Last Sunday morning July 28th at 3:30 A.M., we were called to Scott & Taylor Co., a woodworking plant in our city, and when we arrived at the scene the whole plant was a mass of flame.

We immediately connected all of our pumpers to the hydrants and our Ahrens-Fox pumper worked perfect in every respect. We had three lines connected to this truck and she worked continuous for thirteen hours without a shutdown. The operators of this truck tell me time and time again, how easy the truck handles, and how simple it is to operate the pump.

This Ahrens-Fox pumper was purchased in 1937, and it is one of the most economical pieces of fire equipment we have in our fire department, and as far as being dependable, I dare say that during its ten years of service it has never failed us once, but has always been ready to go to all alarms, in either winter or summer.

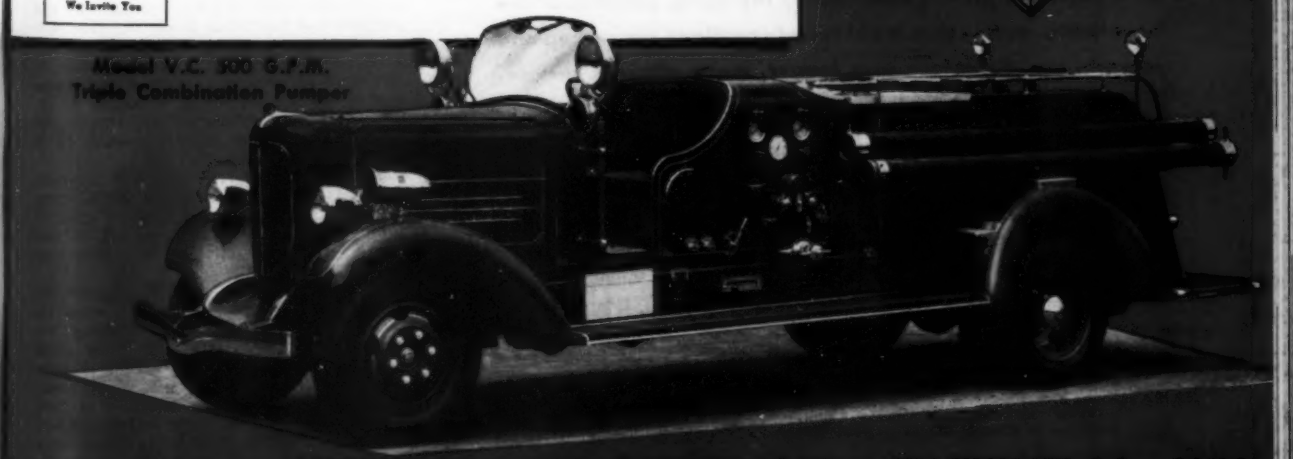
Very truly yours,

H. G. Lundberg
Chief, Fire Department.

Fire Chiefs from communities all over the nation know that the name Ahrens-Fox stands for dependability and economy in fire apparatus. Ahrens-Fox Pumpers, old and new, are daily demonstrating their readiness to go and their ability to work.

Before investing in new apparatus, be sure to investigate Ahrens-Fox. New models now in production are even better than before.

AHRENS-FOX



AHRENS-FOX FIRE ENGINE CORP., CINCINNATI 12, OHIO

A PUMP FOR EVERY PURPOSE

pany administration, fire operations from the supervisory position and officer personnel attitudes. Courses of instruction should be maintained for chauffeurs and pump operators, with emphasis on simple hydraulics, various hose layouts and the effect on pump performance, together with information on drafting water and relaying.

In this connection, the layout developed by Acting Battalion Chief Harry Irwin, Supervising Engineer of the New York Fire Department, for conducting full-scale pumping operations within the New York Fire College lives up to Chief Burke's recommendations.

Chief Burke would not overlook the theoretical side of training in this Utopian School. Courses should be provided to insure uniform instruction for fire prevention inspectors; to acquaint them with fire hazards and with laws relating to explosives and the like. Building codes and fire prevention provisions of local laws would be explained from the enforcement angle. In particular, the group should be taught the fundamentals of public relations so that they may operate efficiently without antagonizing the taxpayers.

Devotees of this "super-training school" would not overlook communications, with especial emphasis on radio. "The day is here when every major piece of fire apparatus and all chiefs' cars should be equipped with two-way radio," Chief Burke insists. He would have the International Association of Fire Chiefs sponsor a manual of radio procedure for the guidance of the fire service, in which nomenclature would be standardized and stock technical phrases developed that will eliminate all ambiguity and promote brevity, terseness, and clarity. Further, he would do a bit of instructing in voice modulation for radio speakers. He goes so far as to suggest official auditions for the departmental personnel and thus restrict the use of radio to those who successfully pass requisite tests.

Chief Burke also emphasizes the wisdom of voice amplification at fires and the use of walkie-talkie radio in the fire service. Here, too, will be room for training that will require "doing" as well as "telling."

There can be little questioning of Chief Burke's emphasized statement that the leaders of the fire fighting services of America have an important duty to improve training and fire fighting techniques and to insist on adequate tools and equipment. If they do not take the initiative, who else is to do it? His concluding recommendation that the federal government officially take cognizance of the need for proper education and training in the fire service as a means of reducing the staggering annual loss of life and property due to fire would be a great step forward.

If, as he says, the Federal Government is vitally concerned with crop conservation, soil erosion, flood control and the like why then should it not exhibit the same concern over fire loss conservation?

Fire department budgets generally lack the means for adequate research and development—a part of training, we might add. This has undoubtedly been one of the chief reasons for lack of progressive development along these lines. It is questionable, also, whether private enterprise, and even state and municipal assistance will serve to bring about that Utopia which Chief Burke has laid out.

LONGER HOSE LIFE PROVED BY BOMB TEST

ALL EUREKA FIRE HOSE linings undergo the Oxygen Bomb Test. This proves scientifically the aging qualities of the hose lining, makes sure it will remain resilient, uncracked and smooth, and therefore give longer, more efficient service.

Other Eureka advantages include Smooth Interior Filler Ply for maximum nozzle pressure, Mildew Proofing with "Formula X", Balanced Weave and Controlled Curing to eliminate excessive stretching and warping.

"For greater protection to life and property"
EUREKA FIRE HOSE
Division of United States Rubber Company
1230 Avenue of the Americas • Rockefeller Center • New York 20, N. Y.

For Fast, Safe, Effective Fire-Fighting Use StrangleAIR FOAM and FIRE-SNUFFER NOZZLES

Pat. 2,388,508

StrangleAIR IS FAST

StrangleAIR IS SAFE

StrangleAIR IS EFFECTIVE

Fast to subdue and extinguish flames and quick to reduce heat. No fire can withstand smothering effect of StrangleAIR FOAM.

It is safe to handle, safe to use, safe to store. And its thick foamy lather gives added safety by eliminating flash-backs and preventing formation of noxious or dangerous fumes.

It shuts off air immediately. Flames die under heavy coating of StrangleAIR FOAM that can be applied to any surface, horizontal or vertical. StrangleAIR clings and lasts for hours without injury to paint, woodwork, furniture or carpet.

For prompt, complete information, fill in coupon and mail today.

FIRE-SNUFFER NOZZLES

are designed expressly and exclusively for foam. Light, sturdy, dependable units, easy to clean and handle. Available in standard sizes from 2½ GPM to 250 GPM through fire appliance supply houses.

Play safe—feel safe—be safe with StrangleAIR FOAM and FIRE-SNUFFER NOZZLES.

Please send me illustrated Bulletin 1051

Name .....

Fire Dept. .....

Address .....

.....

StrangleAIR FOAM · FIRE-SNUFFER NOZZLES

AMERICAN DIE & TOOL COMPANY, INC., East Reading, Pennsylvania

proved...

...through 40 years of fighting fires

Forty years ago Crackerjack Fire Hose was being hauled to the flames by horse power. Today many thousands of feet of Crackerjack Hose are carried by modern streamlined engines. Through the years American Rubber's know-how, experience, constant testing and improving have kept Crackerjack the most ruggedly dependable fire hose obtainable.

Crackerjack is easy handling, so lines are laid quickly. It is as tough as it is pliable, with extra years of service built into every foot of it.

Crackerjack Fire Hose is made by experienced craftsmen who have spent years in the industry.

The AMERICAN RUBBER Mfg. Co.
Park Avenue and Watts Street • Oakland 8, California

CRACKERJACK FIRE HOSE

However, the outlook is not too discouraging. Already some good progress is being made. As this is written, the new Fire College of the University of Maryland is being opened with much fanfare. It possesses many of the attributes sought by the long-striving instructors of the Fire Department Instructors' Conference, and by Chief Burke and adherents of the Navy idea of teaching by doing.

In Connecticut, even more elaborate and ambitious plans call for a fire college, state supported, that will embody practically all of the elements advanced by Chief Burke. Other states—and counties—are weighing the entire problem of better, more efficient fire service training.

Even more encouraging is the interest being shown by municipal fire departments in this revision of training techniques. New Haven has shown how effectively a municipal fire department can adopt the Navy's procedures and build upon them, with marked benefit to the department and the community. Other cities are planning and working toward that end.

Meanwhile, the optimistic, forward-thinking fire protection and prevention authorities and students will, we hope, set up this objective of training by doing and strive to advance it wherever and whenever possible.

August Fire Losses

Estimated fire losses in the United States totalled $40,019,000 for the month of August, an increase of $5,923,000 or 17 per cent over losses of $34,096,000 for August, 1945, it was announced today by W. E. Mallalieu, General Manager of the National Board of Fire Underwriters.

The losses were the highest recorded in August of any year since the National Board began tabulating monthly losses in 1929. There were a bare two per cent under losses of $40,998,000 recorded in July.

August's losses bring the total for the first eight months of 1946 to $378,323,000, an increase of $76,882,000 or 25.2 per cent over losses of $301,541,000 for the first eight months of 1945.

Fire losses for the 12 months ending August 31 totalled $532,111,000 an increase of $84,408,000 or 18.8 per cent over losses of $447,703,000 for the similar period ending August 31, 1945.

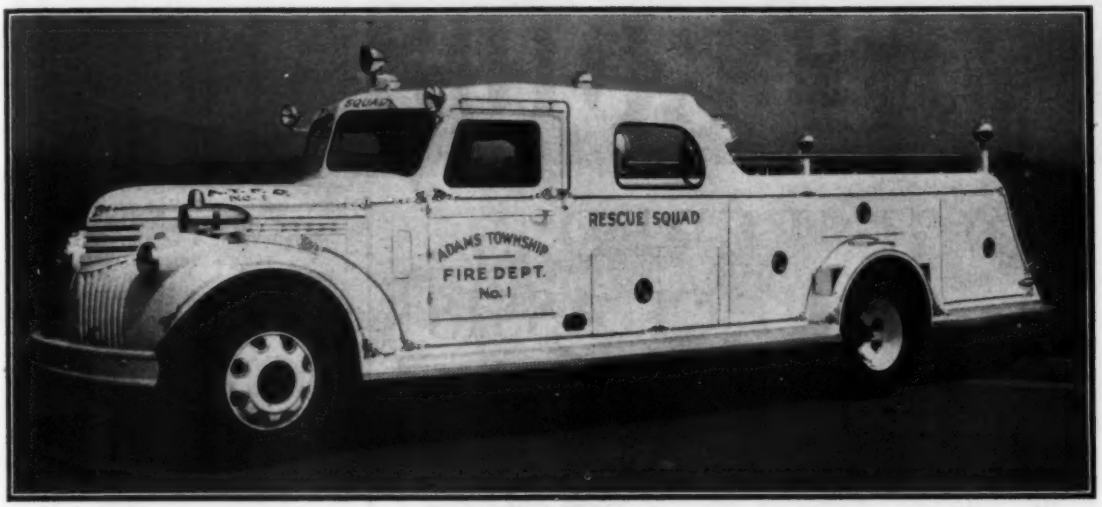
Fire losses are estimated on the basis of incurred losses reported to the National Board of Fire Underwriters by member companies, plus an allowance for unreported and uninsured losses.

Officers of Great Lakes Division

The following officers of the Great Lakes Division of the International Association of Fire Chiefs were elected at a meeting held in connection with the recent Cleveland conference of the International Association of Fire Chiefs.

Secretary-Treasurer Frank W. Bender of Saginaw, Mich., was elected Director to succeed Chief Peter Steinkellner of Milwaukee. Other officers chosen are as follows: President, Chief J. M. Griffin, Hamtramck, Mich.; First Vice-President, Chief John A. McCracken, Gary, Ind.; Second Vice-President, Chief Julius Seiy, Cudahy, Wis.; Secretary-Treasurer, Chief Raymond Earle, Massillon, Ohio.

The following chiefs were elected as



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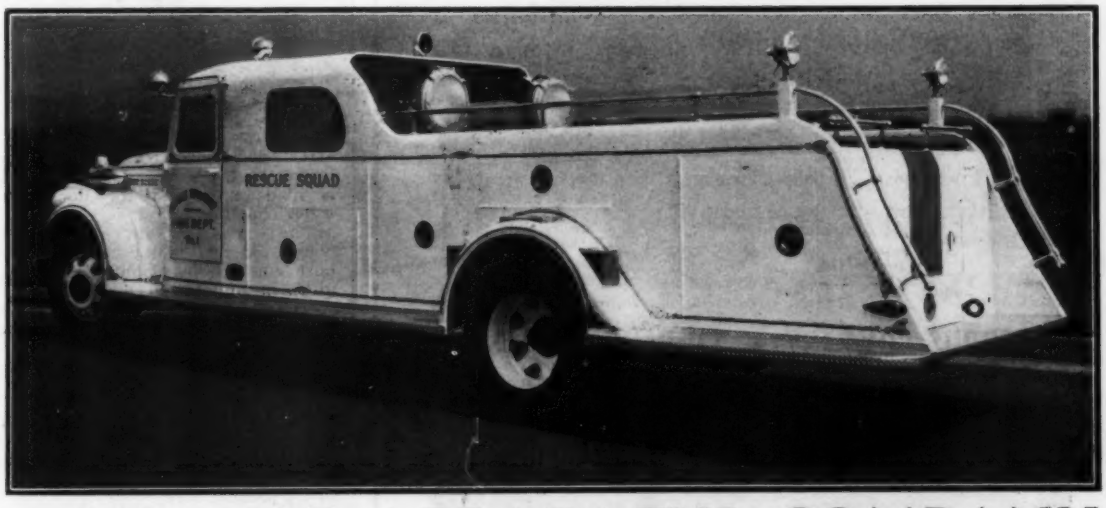
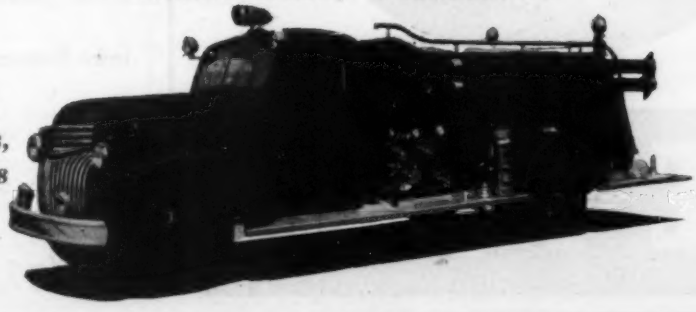


OREN FIRE APPARATUS COMPANY

1201-09 WEST SALEM AVENUE

ROANOKE, VIRGINIA

Conventional Type Pumpers, Tankers, Quads Available



The South's Only Fire Truck Manufacturer

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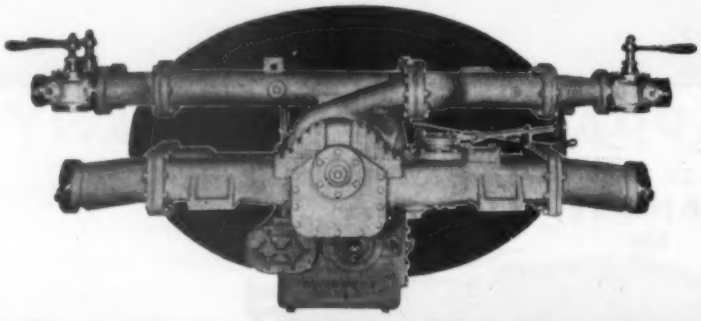
ENGINEERED . . . for EACH CHASSIS

WATEROUS Fire Pumps are individually "tailored" to each chassis and engine. Such items as horsepower required by the pump, together with the pump speeds, are "balanced" within the range of speed and horsepower characteristics of the engine. Successfully engineered into several makes of well known fire apparatus, WATEROUS Fire Pumps fully meet the requirements of Underwriters' Laboratories, as well as manufacturers' specifications, for ample margin of surplus horsepower above maximum capacity, pressure, pump speed, etc. The performance of WATEROUS Centrifugals is steady and smooth. With ample flow from a fire hydrant, they will deliver considerably more than their rated capacities. Send for our 60th Anniversary Fire Pump Catalog. Specify WATEROUS on your next pumper.

Waterous Dependable SINCE 1886

WATEROUS COMPANY • ST. PAUL, MINNESOTA

Also Manufacturers of WATEROUS Fire Hydrants



FIRE PUMPS

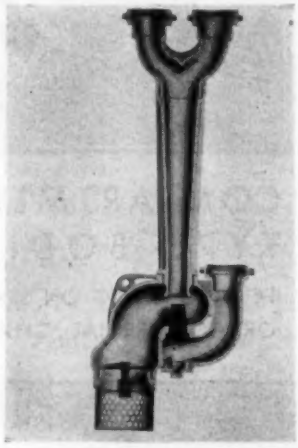
State Vice-Presidents; Minnesota, Chief Napoleon Ayotte, Hibbing; Wisconsin, Chief Julius Seiy, Cudahy; Illinois, Chief Roy Alsip, Champaign; Ohio, Chief Roy T. Messerly, Zanesville; Michigan, Chief Frank Ford, Highland Park; Indiana, Chief Joseph Willardo, East Chicago.

Manufacturers' Announcements

(*Continued from page 766*)

same except that the 4-HH uses two 2½" return lines from the siamese which is integral with the body.

Designed for use with 750 gallon pumpers or their equivalent, the Model



Accel-O-Rate Model 4-HH

4-HH, has been found particularly effective by users where hydrant pressure is inadequate, and for dockside and waterfront fires.

The Accel-O-Rate Model 4-HH weighs 33 lbs., and uses standard 2½" hose connections. Complete details are given in Bulletin 46, which will be sent upon request to Derbyshire Machine & Tool Company 5222 Belfield Avenue, Philadelphia, Pa.

Quaker Rubber Expands

In the expanding development of their Fire Hose Department, Quaker Rubber Corporation of Philadelphia has just announced the advancement of two of its present staff.

Mr. Frank A. Rowe becomes the District Manager of Philadelphia Fire Hose Division, with headquarters at Philadelphia; and Mr. P. H. Penman, District Manager of the Cleveland Fire Hose Division, making his headquarters at the Cleveland Branch.

Iowa Firemen's Association Elects Officers

The sixty-ninth annual convention of the Iowa Firemen's Association, which was held in Carroll, Iowa, in September elected the following officers for the coming year: President, Paul A. Soener, Independence; Vice-Presidents, L. F. Barry, Ames and O. F. Spenser, and Secretary-Treasurer, Harry C. Reinholdt, Manning. Osceola was selected as the 1947 convention city.

Congratulations TO THE Scott Air-Pak

NOW I DO IN MINUTES WHAT MIGHT TAKE DAYS!

Scott Aviation Corporation
Safety Equipment Division
Lancaster, New York

Gentlemen:

It may be very encouraging for you to know of the wonderful job one of your Scott Air Paks did for us the other day in enabling us to recover the body of a drowning victim in a very few minutes when it would ordinarily be a matter of hours or even days.

This youth had drowned in an old sand pit, the bottom of which had many springs. The water was very cold and the springs created a strong undertow near the bottom of the pit.

Rescue Company #2 of the Boston Fire Department, of which I am a member, was summoned, and, wearing a Scott Air Pak, I entered the water and searched for the body to a depth of about twenty five feet. In about seven minutes of actual diving time I succeeded in locating the victim and bringing him to the surface. This was the first time this mask has been used for such a purpose in our department, and I have not heard of it being so used in any other.

Even at the depth of 25 feet there was not the slightest difficulty in breathing, and the portable tank on my back obviated the necessity of air lines, allowing me to move freely and work easily even though the bottom of the pit was littered with tree trunks and roots. Also, the fact that the air tank was high on my shoulders kept me upright and aided me considerably in moving about.

Several days later, we were called to Dedham by the Fire Chief of Dedham to a drowning there, as he had heard of our success and was interested in our method of procedure. The Chief of the Dedham Fire Department was also present and both chiefs were amazed at the speed and ease with which we worked.

I believe that this mask has opened up a whole new field in underwater rescue work, and my purpose in writing is to express my congratulations on your success in developing this mask. I am enclosing a clipping from the Boston Post praising the work done by means of this mask.

Yours sincerely,

Edward F. Sullivan

Hoseman Edward F. Sullivan of Rescue Co. No. 2, equipped with Scott Air-Pak ready for under-water rescue work.

● "Even at the depth of 25 feet there was not the slightest difficulty in breathing, and the portable tank on my back obviated the necessity of air lines, allowing me to move freely and work easily even though the bottom of the pit was littered with tree trunks and roots. Also, the fact that the air tank was high on my shoulders kept me upright and aided me considerably in moving about."

The enthusiasm of those men who have used the Scott Air-Pak is largely due to features found in no other type of breathing apparatus—full—clear vision—no lens fogging—freedom of motion—luminous air gauge—proven regulator design and lightweight, comfortable working equipment.

Sold by leading Fire Equipment houses from coast to coast.

SAFETY EQUIPMENT DIVISION

SCOTT AVIATION CORPORATION
ESTABLISHED 1932
215 ERIE ST. LANCASTER, N. Y.

INSURANCE
WON'T STOP FIRES!
OR PUT YOU BACK IN PRODUCTION
IN A FEW HOURS

Smoke pours out; the fire alarm sounds; workers rush out of the building; the fire started as a small blaze, but your plant is out of operation for weeks; all the insurance in the world won't put out the fire. But insurance is just as necessary as Pyrene Fire Extinguishers at the start. Standardize on Pyrene Protection. Control of fire in all its phases has been Pyrene's business for almost 40 years. There are specific Pyrene Fire Extinguishers for different classes of fires. A Pyrene jobber will be glad to help you determine your fire hazards and advise best methods for protection from them.

A Pyrene Soda-Acid or Water-Type extinguisher can keep a little fire from getting big—ideal for stores, office and plants or other indoor locations containing ordinary combustibles, wood, textiles, paper. Locations where oil, gas, paints, lacquers, solvents and other flammable liquids are used should be protected by Pyrene Foam, a fire-choking blanket of tiny bubbles. It flows freely over the surface of the burning liquid, covering the whole area of the blaze with an air-tight layer of foam.

Pyrene

CONSULT YOUR NEAREST PYRENE JOBBER OR WRITE FOR ADDITIONAL INFORMATION

For electric equipment, diesel engines and flammable liquids, a Pyrene Vaporizing Liquid extinguisher smothers fire without injury to equipment; a non-conductor, it may be used on electrical equipment still in operation or around live wires.

Pyrene Manufacturing Company
NEWARK 8 NEW JERSEY
Affiliated with the C-O-Two Fire Equipment Co.

Persons in the News

(*Continued from page 763*)

H. A. Shippey New Chief at Westport

A story of a unique public service by a private institution lies behind the recent announcement that the Board of Selectmen of Westport, Connecticut, had elected Harold A. Shippey as the

H. A. Shippey

town's new Fire Chief. The former Chief Dennert had been killed in a truck explosion, and the choice of his successor lay among several men of more or less equal experience in the town department. It was agreed that the selection would be made purely on merit, but the arrival at such a point was agreed to be a knotty problem.

It was finally decided to seek expert outside advice and the name of The Delehanty Institute of New York City was suggested. The Institute had earned a reputation during the past 30 years for its success in preparing men and women for civil service examinations of all kinds. More than 85% of New York City's firefighters of all ranks are Delehanty graduates.

M. J. Delehanty, Director of the Institute, agreed to conduct an examination. He said that he was happy for the opportunity which would enable him to further the interests of the civil service merit system. He thereupon assigned a group of faculty members, headed by William E. Reed, Chief Instructor, to visit the town personally and inspect the various types of fire hazards represented in commercial and residential construction, as well as the water supply and type of apparatus—also to determine how up to date the men of the department were as to modern methods of firefighting. The Institute then drew up a detailed examination covering firefighting problems with which the town might be confronted, fire prevention procedure, use and maintenance of equipment and administrative duties. In arriving at the final average attained by each candidate credit was also allowed for length of service. The final averages showed that

For Speedy work on a ladder

USE INDIAN FIRE PUMPS

You Can Get Into Action Fast with These Famous Fire Fighters!

Due to the fact that *INDIAN FIRE PUMPS* carry slung on the back, leaving arms free, they are ideal for use on ladders. When it is necessary to make a little water go a long way and get to the blaze quickly use *INDIANS*. They are just as effective on indoor as outside fires.

An *INDIAN FIRE PUMP* will take care of chimney, awning and roof fires and "cover exposures" on nearby property subjected to flying embers and sparks. For use in confined spaces they have no equal.

Use the INDIANS on most of your calls. A one man fire department.

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ONLY CLEAR WATER USED— NO CHEMICALS

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PACIFIC COAST AGENTS

Hercules Equip. & Rubber Co., 415 Brannan St., San Francisco, Cal.
Mill & Mine Supply Co., 2701 4th Ave. So., Seattle, Wash.
Fred H. Barnett Co., 2005 S.E. 8th Ave., Portland, Oregon
Fred H. Barnett Co., 600 Spring St., Klamath Falls, Ore.
Fred H. Barnett Co., Broadway & Harris St., Eureka, Cal.
Ray G. Davis Co., 617 E. 3rd St., Los Angeles, Cal.

CANADA AGENTS

Hughes & Hobbs Equip. Co., 395 W. 5th Ave., Vancouver, Canada
Duke Equipment Co., 397 Duke St., Montreal, Canada

Mr. Shippey was the winner and his election by the Selectmen followed without a dissenting vote.

Fifty-Four Years' Service

Edwin M. Holden, one of the oldest, if not the oldest active volunteer firemen in New York State has seen over fifty-five years active service in the Gilbertsville, N. Y., Fire Department, many years of it as an officer and chief.

He joined Eagle Fire Engine & Hose Co. No. 1, on May 2, 1891 and in 1892 was elected second assistant chief, being elevated to first assistant the following year. In 1895 he was named chief, which post he held for many years.

In his half century-plus of service Mr. Holden has missed but one regular meeting of his department and, while identified with the department, has answered every fire alarm sounded within the corporate limits of the village. He is still an active fireman and is president and a trustee of the department.

Appointments:

Walter Salyers has been placed in charge of the Covington, Ky., Fire Department after Fire Chief Frank A. Northcutt was granted an extended leave of absence because of illness. The new acting chief was assistant chief for nine years. Alfred Bowman is the newly appointed assistant.

Dr. L. L. Tyer has been named Fire Chief of the Canisteo, N. Y., Volunteer Fire Department. Walter Benedict was given the post of assistant chief.

Fire Chief Scott Dewey has resigned from the Charlotte, Mich., Fire Department but will remain a member. Don Klaiss has been elected chief.

A temporary fire chief in the person of John Kennedy, Jr., has been appointed in Gaffney, S. C., following the resignation of former Chief Jack Cook as a result of local disagreements. Mayor Waite C. Hamrick, who announced the appointment of Kennedy, an ex-fireman who has been serving with the police, has appointed Alderman W. K. Gunter, Jr., as fire commissioner.

Officers of the Madison Lake, Minn., Fire Department and Relief Association for the coming year are: President, H. L. Hoehn; vice-president, Dr. R. M. McLaughlin; Secretary, Ralph Jacobs, and Treasurer, Charles Stevens.

Sheriff Claude Anderson was appointed Rural Fire Chief of Powder River County, Montana, by the Board of County Commissioners. They also named forty-two district rural chiefs.

Deaths:

Lieutenant Edward W. O'Connor, 60, assistant fire marshal of New London, Conn., died August 20. He was the second oldest member of the New London Fire Department in point of service, joining the F. L. Allen Hook & Ladder Co. in 1913. He was active in local and state fire service organization work.

Ashley Dunham, 82, organizer and first fire chief of the Waterloo, Iowa, paid Fire Department, died in September. He retired from the fire service last April. He became a fireman in 1890 and was chief for four years before the paid department was formed. His "fire automobile" was among the first motor cars in Waterloo.

George W. Smith, 63, retired District of Columbia battalion chief died August 19, 1946, after a long illness. He retired from the department in 1941, and was one of the organizers of the City Firefighters Ass'n. in 1913.

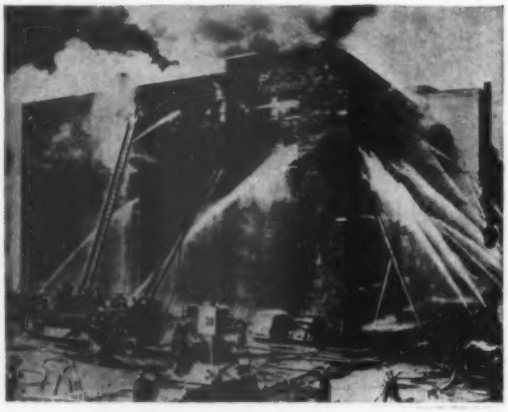
Chief E. E. Coulter Dies

Chief Earl Ellis Coulter of the Chattanooga, Tenn., Fire Department died on October 9, ten days after he had been stricken with a cold which later developed into pneumonia.

The Chief, a member of the fire department for twenty-nine years, came up through the ranks, receiving his appointment as Chief on November 1, 1941, upon the retirement of Chief Robert Jones.

The Cover Photo

This month's cover photo shows exploding magnesium engine blocks sending up a shower of white smoke and spray at Indianapolis, Ind., during a fire in a storage dump. Four firemen and another man were injured or burned, one seriously.



FIRE

has no respect for Persons or Communities

Will your equipment click 100% when the alarm is given and the sirens shriek an answer?

There is no room for guess work in modern fire fighting when you have Quaker's Modern Municipal Fire Hose with Easy Fold Construction because you are assured of unfailing hose performance. It is unlike any hose you have used before, in the protection of your firemen and the lives and homes of the people in your community.

Insist on and order Quaker's Modern Municipal Fire Hose.

"If there's a way to get it done . . . QUAKER will do it."

QUAKER RUBBER CORPORATION

Mfrs. Industrial Rubber Products and Automotive Rubber Products

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Quaker Pacific Rubber Company

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FIRE strikes swiftly!

LIGHTNING SERVICE FOR YOU

THROUGH GENERAL'S DISTRIBUTION SYSTEM

S. O. S. FIRE GUARD Vaporizing Liquid Extinguisher—America's great utility fire fighter. Effective on oil, electrical, grease, and gasoline fires. Will not freeze at 48° below zero. 1 qt. and 1½ qt. sizes.

CD-SNO FOG Carbon Dioxide Extinguisher. Kills fire instantly, yet cannot damage equipment, premises, or personnel. Effective on electrical, oil, and gasoline fires. Sizes 2 to 100 lbs.

RED STAR Soda Acid Extinguisher. Releases strong stream of water under chemical pressure. Immediately effective on wood, paper, or textile fires.

Shown below is The General Pacific Corp. factory in Los Angeles, one of nine factory branches and warehouses and sixteen sales offices of The General Detroit Corp., conveniently located throughout the nation. Supplementing these is a nation-wide network of independent distributors to serve you with fire protection necessities.

IF IT'S

GENERAL

IT'S DEPENDABLE

THE GENERAL DETROIT CORP.

Manufacturers of Fire Extinguishers,
Motor Fire Apparatus and Allied Equipment

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FLOAFOME Foam Type Extinguisher. Smothers fire under a blanket of foam. 2½ gallon size produces 22 gallons of foam. For use on wood, paper, textile, oil, and gasoline fires.

ALASKAN and PROTECTOR Pump Type Extinguishers. For wood, paper, or textile fires. Range is 45 feet. Non-freeze charge protects at 48° below zero. ALASKAN—2½ gallons; PROTECTOR—5 gallons.

PACEMAKER Knapsack Type Extinguisher. Can be strapped on back and operated from that position. Telescopic pump nozzle leaves both hands free for fighting fire. Ideal for outdoor fires.

Trade Literature

"How to Fight Fires and Protect Property"—With our annual fire loss reaching over $455,000,000 this new 20-page booklet entitled "How to Fight Fires and Protect Property" should be very timely for industrial property owners.

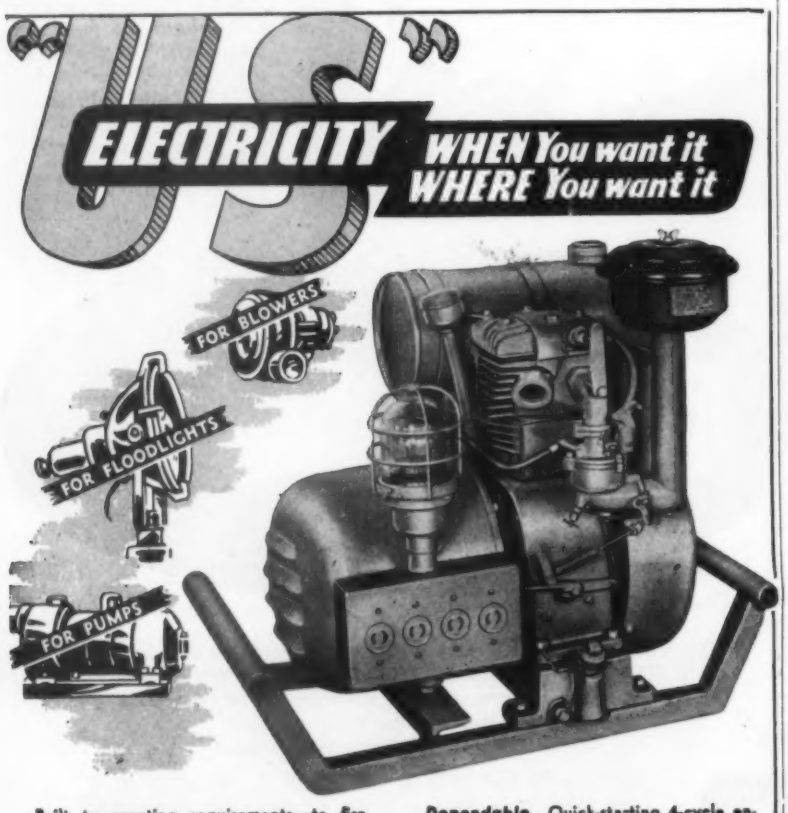
Just published by Randolph Laboratories, Inc., 8 E. Kinzie St., Chicago, Illinois, this handy 20-page folder graphically explains and illustrates the latest techniques in fighting fires with carbon dioxide and other type fire extinguishers. It answers, with photographs and diagrams, such vital questions as: "What type fire hazards should I recognize?" "How can I mobilize my employee fire defense?" "What is the correct spacing and bracketing height for various type fire extinguishers?" "What are the approved methods of operation for carbon dioxide, soda-acid, foam, pump tank and carbon tetrachloride extinguishers?"

For a copy, write for catalog R-5827 "Fire Protection Handbook," Randolph Laboratories, 8 E. Kinzie St., Chicago 11, Illinois.

"Shield Them from Danger"—Home fire protection is the subject of a 20-page booklet recently published by The General Detroit Corp. and The General Pacific Corp. It is devoted exclusively to facts on fire prevention and fire protection.

The publication, according to E. A. Warren, General's Vice President in Charge of Sales, is part of General's continuing program to stress the importance of fire protection.

Included in "Shield Them from Danger" are illustrated chapters on home fire protection planning, methods of keeping fire hazards under control, elimination of hazards through proper fire hygiene, and what to do until the fire department arrives.



Built to exacting requirements—to fire department specifications. . . . Designed to stand up under the hard usage and difficult conditions a Fire Department Portable has to meet! In service with leading fire departments, these rugged 1500 watt Units have *proved* themselves capable of meeting every emergency.

Dependable. **Quick-starting 4-cycle engine. Positive lubrication.**

Start it and forget it! **Automatic voltage regulation under all loads. No adjusting necessary. No fussing to mix gasoline and oil.**

Compact. **An easy load for two men.**

Larger and smaller sizes available. Write for further information.

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New Bulletins By Mearl—The Mearl Corporation, 153 Waverly Place, New York 14, N. Y., has recently issued a new, colorful bulletin captioned "War-born Fire-Fighter for Peacetime Protection."

This publication answers four questions having to do with foam, and specifically Mearlfoam: (1) What is Mearlfoam-5? (2) How does it perform? (3) Where is it used? and (4) What equipment is available for its use?

Mearlfoam is the liquid for mechanical foam which was used extensively by the Navy during the war and which, following the dropping of wartime restrictions, has been introduced and is now being sold to the nation's municipal and private fire-fighters.

Waterous Centrifugal Fire Pumps—The Waterous Company, of St. Paul, Minn., builders of fire apparatus pumps, has just issued an attractive 16-page folder illustrating and describing their line of centrifugal pumps. The folder also includes a concise description of the principle of operation of the centrifugal pump, as well as descriptions of primers and relief valves; also included are basic pump hydraulics and principal performance characteristics of a centrifugal pump.

"We Back Scott Air-Pak"—Scott Aviation Corporation has published a booklet captioned "We Back Scott Air-Pak." This book gives the history and details as to how the Scott Air-Pak came into being. It also gives a concise history of the background of the Scott Aviation Corporation and its development from the time it was organized in 1932 up to the spring of 1946. A copy may be had by writing to the Scott Aviation Corporation, Safety Equipment Division, Lancaster, New York, U. S. A.

Book Shelf

INCENDIARY WARFARE, by George J. B. Fisher, Colonel, Chemical Warfare Service, U. S. Army; 130 pages, fully illustrated; McGraw-Hill Book Co., Inc., New York, N. Y.

This book presents in a very instructive way the story of the use of incendiary agents in World War II. Included is a detailed description of the various incendiary bombs and other incendiary munitions employed.

Of particular interest to fire fighters are the chapters on Propagation of Fire, Wartime Fire Defense and Preparedness Against Incendiary Attack. The phenomena accompanying a conflagration caused by large-scale incendiary raids are fully explained.

The author includes much data from official sources, which makes the book especially valuable to those who are interested in securing a complete picture of incendiary warfare, its effects and defensive measures which must be taken.

Convention Dates

Oct. 23—EMERGENCY PLAN OF FAIRFIELD COUNTY. Monthly meeting, Stamford, Conn. Chief John Moehring, Belltown, Stamford, Conn., President.

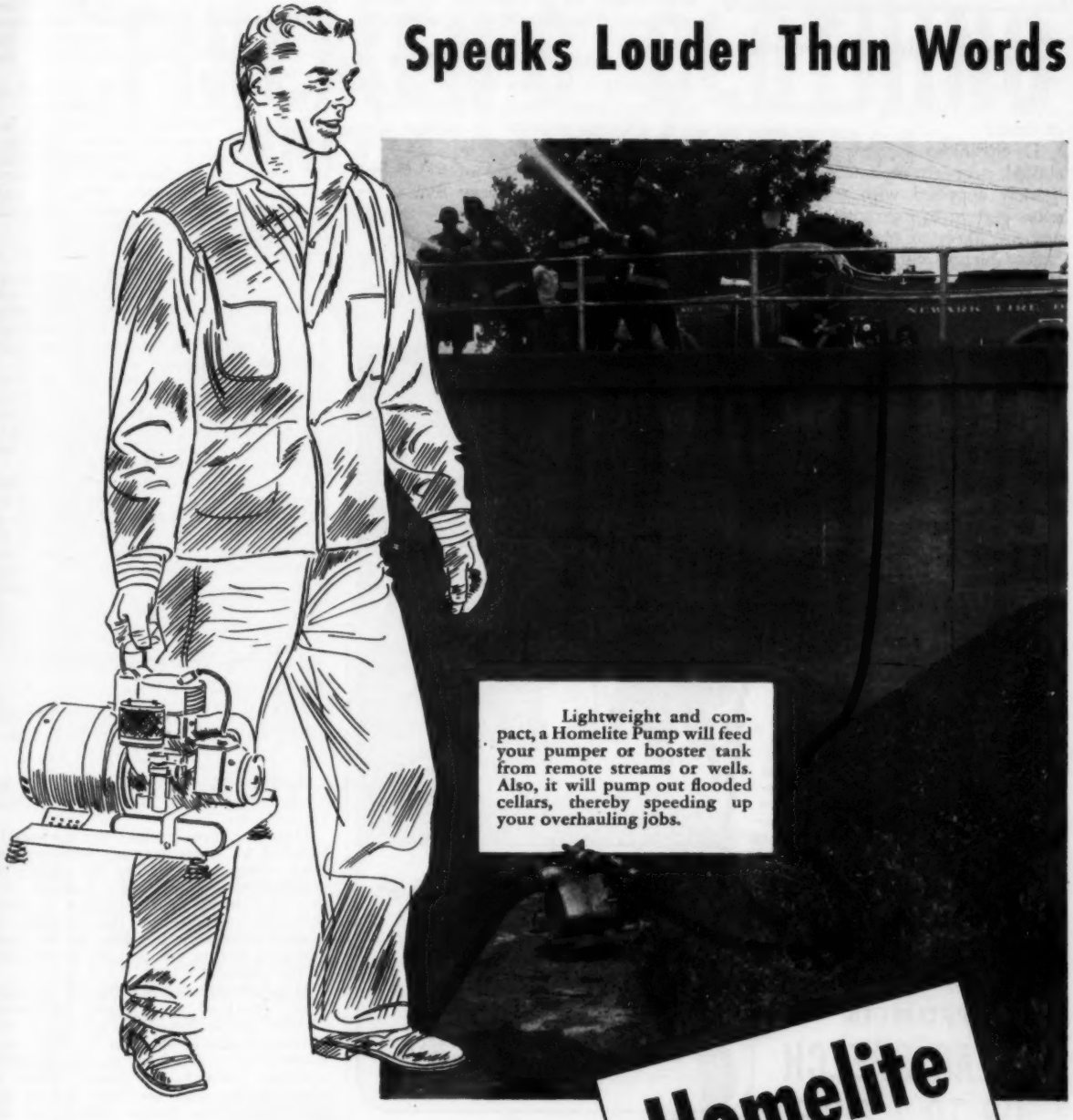
Oct. 23-25—INDIANA FIRE CHIEFS ASSOCIATION. Annual meeting, Terre Haute, Ind. Secretary, Chief Archie McCabe, Muncie, Ind.

Oct. 27-30—PACIFIC COAST ASSOCIATION OF FIRE CHIEFS. Annual meeting, Long Beach, Cal. Secretary, Jay W. Stevens, Merchants Exchange Building, San Francisco, Cal.

Oct. 30-Nov. 1—SOUTHWESTERN ASSOCIATION OF FIRE CHIEFS. Annual meeting, Monroe, La. Secretary-Treasurer, Chief G. R. McAlpine, Fire Headquarters, Oklahoma City, Okla.

Nov. 11-14 — INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION. Annual meeting, Miami, Fla. Secretary, Irvin Shulsinger, 8 East 41st Street, New York 17, N. Y.

Their Performance Speaks Louder Than Words



Lightweight and compact, a Homelite Pump will feed your pumper or booster tank from remote streams or wells. Also, it will pump out flooded cellars, thereby speeding up your overhauling jobs.

We'd much rather show you Homelite Portable Gasoline-Engine-Driven Pumps *in action* than just talk about them. Action speaks louder than words.

So why not let us give you a free demonstration . . . any place you want it. See how fast a Homelite really pumps, how quickly it primes itself, how easily it handles heavy liquids and solids. See for yourself why a Homelite Portable Pump is just as useful . . . *and just as good a performer* . . . as a Homelite Portable Generator.

To get such a demonstration, free from all obligations, simply write. We'll have our nearest representative get in touch with you.

Homelite
CORPORATION
Port Chester, New York
Portable Pumps Generators and Blowers
GASOLINE-ENGINE-DRIVEN

Questions and Answers

"True or False" Statements

"To the Editor:

Are the following statements true or false?

1. Sprinkler systems, properly installed, properly maintained and adequately supplied with water are always certain to extinguish or control any fire likely to start.
2. Calcium carbide even by itself is combustible and explosive.
3. The words "inflammable" and "combustible" have the same meaning.
4. Hose under good pressure is more likely to be damaged by being run over than hose with a minimum pressure.
5. Probably the main object of ventilating is to draw heat, smoke and gas from lower levels of a building.
6. Carbon dioxide is inexpensive and very easily obtainable.
7. The canvas part of a life net should be replaced every five years regardless of whether the bottom is in good condition or not.
8. A fire company is only as strong as its weakest man.

J. J. W.

Answer: Your questions will be answered in the order in which are given.

1. False. No device is "always certain" to function. It is easy to conceive a circumstance under which sprinklers would neither hold not control a fire even if all conditions specified in the problem were proper.
2. False. Calcium carbide by itself is neither combustible nor explosive.
3. False. "Inflammable" may be interpreted as meaning highly combustible, but there is a difference between the two terms "inflammable" and "combustible." For example, pieces of coal are combustible, but surely could not be considered inflammable.
4. False.
5. True.
6. False. Comparatively speaking, carbon dioxide is fairly expensive, and unless produced locally, is not readily obtainable. It requires transportation from its source to the user in specially designed containers.
7. This question cannot be answered either "true" or "false." The period for replacement of the canvas part of the life net depends largely on its design, the service it has subjected to, and the care and maintenance given it.
8. To many variables enter into this question to enable it to be labeled as either "true" or "false." For example, if the company is fully manned, and if all but one man are highly qualified, the company as a unit may function much more effectively than a company made up entirely of average firemen.

Lifting Water by Suction

To the Editor:

Is it possible to draft water through a fifty-foot section of 2½-inch hose?

G. W. C.

Answer: Water cannot be lifted by suction through a length of ordinary 2½-inch fire hose.

However, fire engines are frequently supplied by water through ordinary fire hose where the source of supply is under pressure, such as a hydrant. In this case it is only necessary to have sufficient pressure at the hydrant to overcome the friction loss in the hose and give five to ten pounds at the inlet of the pumper.

It is possible to lift water by 2½-inch hose, provided an ejector, jet pump booster, or turbine-driven booster is employed in the operation. In this case, water is delivered from the pump under pressure through the device, which is placed at or near the inlet end of the hose line. The device delivers an increased supply of water to the fire engine.

This is possibly what you have in mind, although the water is not actually being lifted by suction. Rather, it is being lifted by pressure produced by the device.

Suspending Hose for Drying

To the Editor:

Since moving into our new fire station, we have been hanging our fire hose by the coupling from the top of the tower. We test our fire hose every ninety days and the hose that we do not use at fire hangs in the tower until the next test. Then every

Super-Powered Portable
ELECTRIC MEGAPHONE

Saves Lives!
Controls Panic!
Directs Crowds!

Tool for Firefighters

A portable but powerful loud-speaker should be standard equipment for every fire department. It could assist the officer in charge in directing the efforts of his men. It could assist the police in controlling spectators. It might save many lives by enabling firemen and police to communicate with and to coach persons trapped in burning buildings.

from CHICAGO DAILY NEWS
Friday, June 7, 1946

Amplifies the Human Voice
PROJECTS
CLEAR SPEECH
UP TO ½ MILE

Indispensable as standard equipment for fighting fires and directing orderly dispersal of crowds. Fire chiefs can direct operations of men on ladders or roofs, warn them of impending dangers, speak to and advise people who through lack of direction are lost or trapped. Beams the voice directly to the desired area.

Completely portable! Carries its own power! No wiring, no stringing of speakers, no headphones. Ready for instant use in emergencies. Just attach cable, press trigger switch . . . and normal speech voice is projected clearly and distinctly to a distance of one-half mile and more. Weighs only 11 pounds. Operates efficiently rain or shine. Sturdily constructed. Simple to operate. Fire departments will find this Portable Electric Megaphone a valuable addition to their fire-fighting equipment. Write for complete details, NOW!

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FIREMEN'S CLOTHING
FROM MIDWESTERN

THIS Midwestern Combination Suit, made of Vanitex, the modern waterproof fabric, is sold separately or together. The "Mackinaw Coat" is a highly serviceable garment, with flexible elastic inner sleeves; adjustable collar strap, detachable wool lining, Midwestern safety snaps, two outside pockets, 6" storm flap and many other good features.

The Coat:

- Adjustable collar strap
- Reinforced collar band for lining
- Lining attached with quick snap buttons
- Corduroy lined collars
- Reinforced, double stitched seams
- Vertical seams in sleeve shoulders
- Inside of fabric, heavily napped cloth
- Two outside pockets
- Wool detachable lining
- 6-inch storm flap

Regular Firemen's Boots

Regular Firemen's Boots, ¾ length, reinforced instep, felt linings, available now. Available soon, regular Firemen's Knee Boots. See your local Midwestern dealer or write the factory.

See your Midwestern Mfg. Co. dealer for prices or write the factory.

The Pants:

- Lining held by snap buttons
- Rubberized fabric belt in lining
- Eight suspender buttons
- Two side and one hip pocket
- Safety snap on belt
- Reinforced adjustable belt
- Special Vanitex fabrics
- Wide protecting flap
- Reinforced by rivets

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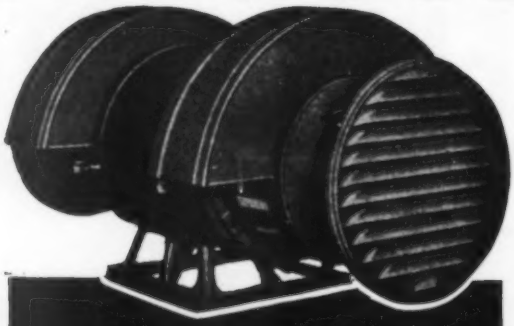
MIDWESTERN MFG. CO.

MACKINAW, ILLINOIS

DEPENDABLE



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You Can Depend On It ALWAYS

in Silver or in
SIRENS—

STERLING
A NAME YOU CAN DEPEND ON

An absolutely dependable, tried and proven siren for communities of all sizes. Loud, clear, simple to install and no maintenance to bother with. Embodying the "know how" of the oldest and largest makers of siren signals in the fire field. Write for descriptive literature and list of towns using the model "M."

ALSO . . .
MANUFACTURERS OF A COMPLETE LINE OF APPARATUS SIRENS

STERLING SIREN FIRE ALARM CO., Inc.
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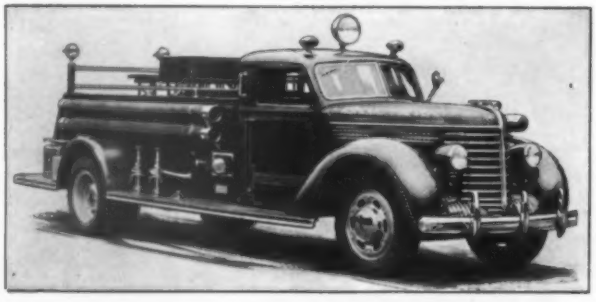
Champion Fire Apparatus



Champion Fire Pumps

NEW 24-PAGE BOOKLET IN COLORS

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W. S. DARLEY & CO., CHICAGO 12

foot of hose in the tower is taken down and tested, water run through it and then loaded into one of the hose company trucks. Will this method of hanging hose by the coupling break down the hose at the coupling and expansion ring, causing it to start leaking? We have had a few sections of hose start leaking around the expansion ring and I wondered if this were the cause of the leaking.

J. W. H.

Answer: It has never been considered destructive to the hose coupling to suspend hose in a drying tower by means of the male coupling. The tension on a coupling when so suspended is less than the tension on the coupling when the hose is under 16 pounds water pressure. So the strain is not severe.

A survey was made a few years back regarding drying of hose, and none of those participating in the survey mentioned any trouble encountered by stringing the hose up by its coupling in drying towers.

Maryland Maps Rural Water Supplies

The State Department of Forests and Parks of Maryland is adopting a new technique in forest fire fighting—mapping hazardous areas, and incidentally spotting its "rural fire plugs."

The "rural fire plugs", a war-time development, are water holes strategically located to aid fire fighting. They are concrete pipes three feet in diameter and four feet deep, in moist places or over springs and wells where water accumulates.

They were set up during the war to help safeguard areas of military value. They can contain as many as 200 gallons, which will go a long way toward fire fighting, according to Assistant State Forester, H. C. Buckingham, in charge of fire control.

The "plugs" are being spotted on maps by special crews of department workers. These maps include notations of types of forest and brush growth, availability of water, and the easiest means of access to any point.

The entire task of mapping all the more hazardous is expected to be completed by next spring and the department plans eventually to include the entire state.

It is reported that the state has a grid map system to facilitate locating rural fires by taking bearings. When a warden sees smoke arise at any particular point he would know immediately the nature of the fire-fighting problem there, and be in a position to summon the best aid and co-ordinate the fire fighting forces in the area, cutting fire losses by an early, effective attack.

New Mexico Firemen Elect Officers

At the recent meeting of the New Mexico State Firemen's Association the following officers were elected: President, Chief N. C. Haynes, Camp Luna, Las Vegas; Vice-Presidents, W. D. Moore, Raton; Chief Bill Bass, Estancia and Chief J. F. Prue, Roy; Secretary-Treasurer, Chief T. A. Rosenwald, Sandia Base, Albuquerque.

Weighing ingredients for rubber compounds at Republic.

Republic
INDUSTRIAL RUBBER SPECIALISTS PUT *Surplus Quality* IN FIRE HOSE

WITH years of exclusive specialization in making rubber serve industry's belt and hose-killing requirements, Republic technologists have proved enviably equipped to develop fire hose constructions capable of highest quality performance and dependability. Rubber compounds that go into the linings of Republic brands of Fire Hose are the utmost achievement in long aging properties. Selected materials and design of the cotton jackets assure maximum wear and pressure resistance throughout the longer established hose life. Chemical Hose by Republic is another premium product of specialized rubber engineering.

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Looms weaving fire hose jackets.

SAVE LIVES!
GET AT A FIRE FAST!
SPEED RESCUE WORK
with this amazing hi-speed
SAW GUN

QUICKLY CUTS THRU
ALL METALS
Stainless or Monel
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WOOD
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An Indispensable Fire-Fighting Tool

The Saw-Gun is an amazingly efficient Portable Power Saw that speedily cuts thru all metals, wood and other materials. Firemen equipped with this essential rescue tool can get at a fire or entrapped persons QUICKLY! Cuts rapidly thru heavy gauge steel. No need to waste precious time removing iron gratings, or other obstructions . . . cut them out of the way with the Saw-Gun! Saves time! Saves lives!

Easily attaches to any electric or air-drill, or flexible shaft. Uses ordinary hack saw blade for cutting. Very simple to operate.

Modern fire-fighters require modern tools. The Saw-Gun will prove an extremely valuable addition to your present equipment. Get all the details NOW!

SEE YOUR JOBBER OR WRITE

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2533 East 73rd Street
Chicago 49, Illinois

The ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

USE OF FIREMEN FOR INTERIOR PAINTING OF STATIONS

THE discussion in this Round Table is a continuation of that which appeared in the September issue of FIRE ENGINEERING on the use of firemen for interior painting of stations.

The general response from our readers makes it necessary to carry the discussion over to this issue.

Readers are invited to send in their comments on this subject, or on next month's subject which is described in a box on a following page. Address communications to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

Discussion of the Topic

Edward J. Hart, Chief, Endicott, N. Y.: We do touch-up jobs around the station, but consider it the best policy to contract all painting jobs.

We consider it more economical for the paint contractor has the equipment, understands mixing paint and knows his job.

The fireman of today should spend all his time on fire prevention, fire protection and an all-year-round training program.

Let's not make a painter out of a fireman!

Edward T. Truslowe, Chief, Englewood, N. J.: Painters are hired in this city as we consider that they do a more efficient job than firemen.

L. F. Elkins, Chief, Decatur, Ala.: We always try to hire a man for painting. He has a trade and depends on it for his livelihood. I have yet to see a fireman who likes to paint regardless of the size of the job.

We find it just as economical to hire a painter. He is faster, saves paint and does a better job.

James T. Doyle, Chief, Ansonia, Conn.: Painters are hired to do this work. Firemen are for fighting fires and emergency work. Painters are expert in their line and do a better job than a fireman.

Louis F. Ledford, Chief, Palo Alto, Cal.: We have considered maintenance painting jobs as part of our routine work.

As painting time is not an important factor and the expense is only that of paint and brushes, we feel that painting can be done more frequently, economically and with satisfactory results. Personnel having pride in quarters are not as likely to abuse station appearance if the responsibility of upkeep lies with them.

J. W. Holt, Chief Bartlesville, Okla.: In the past few years firemen have always painted the interior of the fire stations, but I have come to the conclusion that it is far more satisfactory for me to hire a painter to do the work. In the first place, the fire department does not have the brushes and equipment to paint with. In addition, the clothes which a fireman always ruins when doing the job must be considered. Therefore, I believe that it is more economical and satisfactory to hire a painter.

C. M. Kenner, Chief, Kingsport, Tenn.: Small paint jobs, rooms, porch floors, touch-up jobs, etc., are done by firemen. On outside work where a man is required to climb to high places, and not be able to get down in time to ride the trucks out, we hire painters to do the work. Also, when we repaint the entire inside of a station at one time, bids are let to do this work.

It has been my experience that for small jobs, it is cheaper to have the firemen do the work. I also think they do a better job because they take more time and have more pride in their work.

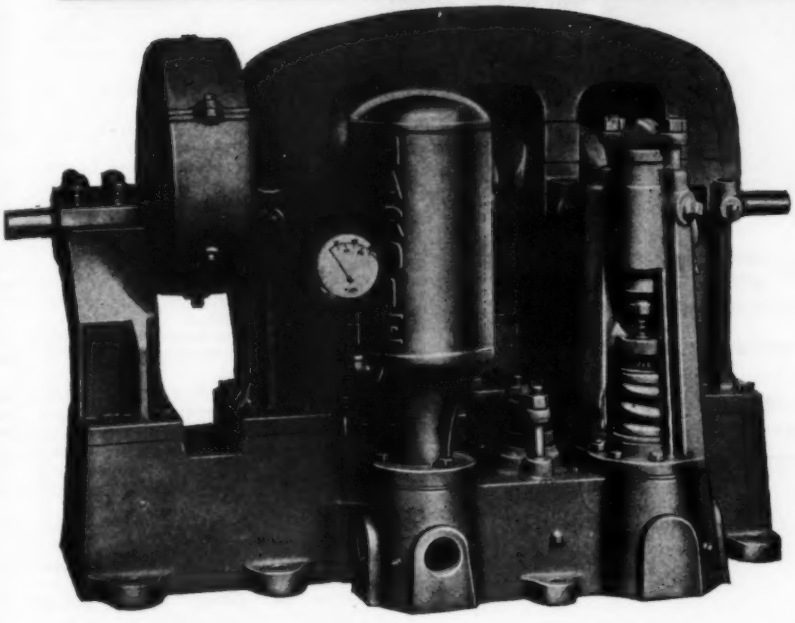
J. P. Newark, Chief, Grand Forks, N. D.: It has been our practice here to have firemen do practically all the painting. The results have been very satisfactory. It would seem to be more economical this way than to hire regular painters. However, it is difficult to say whether a paint job done by painters would stand up longer or look better than one done by firemen.

Raymond W. DeHays, Chief, Findlay, Ohio: In the past in Findlay the firemen have done the interior decorating. However, I do not believe that this is very good economy. In the first place, firemen are not painters, and one cannot expect the workmanship that would result if an experienced man were hired to do the job. In the long run, I believe it would be

HERE IS THE QUESTION

1. **Where small maintenance painting jobs are to be done at a fire station, such as painting the interior of a room, is it your practice to have firemen do it themselves, or are painters hired to do the work?**
2. **If painters are hired, do you believe the results are as economical and as satisfactory as where firemen do it?**

FOG OR STREAM AT 800 P.S.I.



Hardie pumps for Fog Fire Fighter trucks are available in two sizes. The Hardie LCXA (at left) meets any heavy duty two gun requirement with 60 gallons per minute at 800 P. S. I. The Hardie XCXX one gun pump delivers 35 gallons per minute at 800 P. S. I.

Hardie pumps are especially designed for the gruelling duty of fire fighting. They develop full rated capacity and pressure easily at slow speed (118 to 130 R.P.M.). They have the inbuilt stamina to stand up without faltering under long periods of sustained high pressure.

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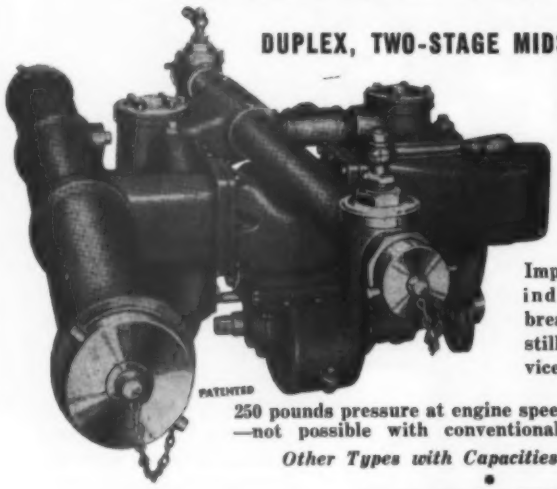
FIRE APPARATUS CENTRIFUGAL PUMPS

DUPLEX, TWO-STAGE MIDSHIP MOUNTED



High Pressure performance entirely unaffected when unit used to pump gritty water.

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Write for descriptive bulletin

FIRE OUT... Stays OUT!

THE MEARL CORPORATION

153 Waverly Place, New York 14, N. Y.

HERE IS THE QUESTION FOR THE NEXT ISSUE

1. Does your community use Fire Police?
2. If so, what authority do they possess?
3. Does their work cover other activities than fire duty? If so, what?

more economical for any city to have the job done by a man who is qualified.

However, money must be appropriated for this work if it is to be done by outside help. This has never been the case in Findlay.

B. B. Hart, Chief, Daytona Beach, Fla.: It is our practice to have firemen do all painting around the station. In fact, we do nearly all repair work on each station.

The men don't like the same grind of classes and drilling every day and are more than glad to do other work for a diversion.

I believe better results are obtained and more economically by the firemen doing the job.

Of course, we couldn't do this work if the department were a union one.

William Rittlemann, Chief, Ambridge, Pa.: We have a firemen's meeting room in the boro building and our men have been doing the painting themselves.

Hired painters may do a better job, but the cost is much more. In other words, the job may be satisfactory, but not as economical.

Loren M. Grant, Chief, Chillicothe, Ohio: We are equipped to do all of our service work and can do it much cheaper than hiring a painter to do it. This is a good way to keep the firemen busy.

Our thought along this line is that idle minds are a breeder of discontent, so we kill two birds with one stone.

John F. Gaedke, Chief, Maintowoc, Wis.: We do all our own washing and painting and the men seem to enjoy it. It is a real experience for them and helps them considerably in maintaining their own homes.

T. P. Treadwell, Chief, Fort Collins, Colo.: Firemen do the painting themselves and seem to enjoy keeping the station in good condition.

The city furnishes us paint for painting the station or equipment, and we find it is more economical than to have it done by painters. Under present conditions, painters have more than they can do.

Rue Chrisman, Chief, Roswell, N. M.: Several years ago we had the station repainted under the supervision of the WPA. It was very satisfactory. Three years later we purchased paint and did the painting ourselves.

I believe, however, that if experienced painters do the job, it is more economical and satisfactory.

J. M. Munger, Chief, Helena, Mont.: The man in our department do all the interior cleaning and painting. If we

(*Continued on page* 790)

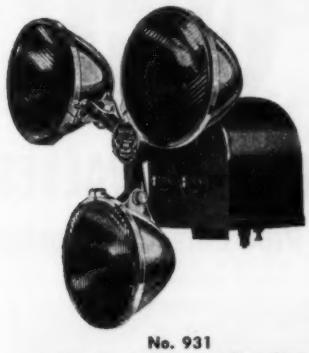
What's Burning

THE following list includes fires of $10,000 loss and over in the United States and Canada for the month of September, 1946.

Month Ending September 30, 1946

Cleveland, Ohio—West side plt. of American Agricultural & Chemical Co., destroyed.
Cleveland, Ohio—South side bulk refining plt. of Standard Oil Co. of Ohio, damaged. Explosion.
Paulding, Ohio—Grand Theatre Bldg. destroyed.
Memphis, Tenn.—Whse. of Liberty Cash Grocers, Inc., damaged.
Havre, Mont.—Gallatin Valley elevator, Frenso, destroyed.
Kenilworth, N. J.—Casting shop of Volco Brass & Copper Co. damaged. Defective chimney.
Mont Rolland, Que.—Mont Rolland Hotel damaged.
Hillsboro, Ore.—Cornelius Feed & Elevator Co. destroyed.
Cranbrook, B. C. — Commercial Garage, Canal Flats, destroyed. Welding spark.
Philomath, Ore.—Wilson Lumber Co. damaged.
Portland, Ore.—U. S. Landing Craft Endyme damaged. Sparks from welder's torch.
Kingsport, Tenn.—Bldg. occupied by Radio Station WKPT, damaged.
Vancouver, B. C.—False Creek Shingle Co. destroyed.
Martinsville, Ind.—Mill of Branch Grain & Seed Co. destroyed.
Eunice, La.—New 27-bin dryer of River Brand Rice Mill destroyed.
Rumford, Me. — Two petroleum product tanks, Smith's Corner Section, destroyed.
Altmar, N. Y.—B. F. Bryand & Son feed mill and storehouse, destroyed.
East Palestine, Ohio—Strohecker & Beight Lumber Co. Yard, destroyed.
Colonial Park, Pa. — Van's Restaurant, United States Route 22, destroyed.
Fort Lauderdale, Fla.—Whse. of Broward Grain Co. damaged.
Paris, Ill.—Illinois Cereal Mills, Inc., grain mill and elevator destroyed.
Cleveland, Ohio — Plt. and whse. of American Rock Wool Corp. damaged.
Biddeford, Me.—Biddeford Hardware Co. damaged.
Hot Springs, Ark.—The Great Northern Hotel destroyed.
Gadsden, Ala.—Whse. of Witherspoon Furniture Co. damaged.
Dawson, Ga.—Terco Milling Co. plt. damaged.
Dover, N. H.—Bldg. occupied by Dover Recreation Center bowling alleys, Personal Finance Co. office and Rosa Furniture Co.; Lowell block occupied by Dover Paint Distributing Co. and Nick's Soda Spa; bldg. occupied by Union bus terminal, Rivers Photo studio and apts., destroyed.
Corvallis, Ore.—Corvallis Junior High School destroyed.
Dallas, Ore. — Prune dryer of J. H. Voth destroyed. Overheated tunnel.
Bristol, Va.—Virginia Woodworking Co. plt. destroyed.
Beckley, W. Va. — U-Pine Inn, a roadhouse, U. S. Route 19-21, near Shady Spring, damaged.
Burney, Cal.—Shops of F. Schott Lumber Truck Servicing concern and ten cabins of Shasta Pines Hotel destroyed.
Dobbins, Cal.—Power Gas & Electric-owned Colgate Power House destroyed. Old switch blew out.
Fresno, Cal. — Packing house owned by Ray Peay and Peters and Garabedian Packing House to the west, destroyed.
Kansas City, Mo. — Trailer mfg. plt. of Red Arrow Trailer Mfg. Co. east of city limits, destroyed.
Portland, Ore.—Coffee Memorial Hospital damaged.
Cloquet, Minn.—Cloquet Wood Conversion Co.'s Mill C damaged. Overheated motor.
Monroe, N. C. — American Legion clubhouse, Camp Sutton, destroyed.
Belleville, Ont.—Graham Dried Food plt. damaged.
Schumacher, Ont. — Schumacher Hardware and Furniture Store damaged.
Richmond, Cal.—Lubrication oil plt. of Standard Oil Co. damaged.
Lockport, N. Y.—A fire destroyed the interior of a three-story business structure.
Toledo, Ohio — Sun Oil Co. gasoline treater, Woodville Road, damaged.
Milford, Del.—Plaza Theatre destroyed.
Miles, Ill. — Tam O'Shanter Country Club destroyed.
Baltimore, Md.—Security Oil Co. damaged. Short circuit.
Grand Rapids, Mich. — Production Die Casting Co. plt. damaged. Explosion.

No. 930 Junior Type Roto-Rays



No. 931
Large Type Apparatus Roto-Rays

SEEING IS BELIEVING!

No. 950 Moto-Ray

And these powerful Buckeye signals leave no doubt in the minds of pedestrians and motorists that official vehicles are on the way!

The revolving red lights of the Roto-Rays cut through the glare of street lights, giving the exact location of your apparatus and the direction in which it is traveling.

Likewise, the Buckeye Moto-Ray provides positive identification of emergency vehicles by day or night, throwing its strong red beam from left to right 40 times a minute.

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FIRE DEPARTMENT ACCESSORIES

BUCKEYE IRON AND BRASS WORKS • DAYTON 2, OHIO

HOWE Fire Truck Equipment to Meet Every Service
Established 1872
HOWE FIRE APPARATUS COMPANY, 1402 West 22nd Street, Anderson, Indiana

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and Pipe Line Accessories

Installing 30-inch M&H Valve in Cast Iron Pipe Supply Line

VALVES: A. W. W. A. types, iron body, bronze mounted with double-disc parallel seat or solid wedge type. Non-rising stem, outside screw and yoke; or, with sliding stem and lever. Also furnished hydraulically operated. Square Bottom type operates in any position. All are rugged and dependable, made of best material with highest quality workmanship.

A. W. W. A. HYDRANTS
Underwriters Approved

SPECIAL TRAFFIC MODEL (shown at right) is designed to yield at ground line under impact, repair being simply renewal of breakable bolts and breakable coupling on stem. Dry top, revolving head, easy to lubricate. High efficiency because barrel diameter not reduced and there are no working parts or obstructions in waterway.

Conform to American Water Works Association specifications. Approved and listed by Underwriters' Laboratories and Associated Factory Mutuals. Well known and widely used for many years.

M&H VALVE
AND FITTINGS COMPANY
ANNISTON, ALABAMA

Ainsworth, Neb.—South hangar of municipal airport with planes owned by Aero Service Co. destroyed.

Lancaster, Pa. — First Methodist Church destroyed.

Sharon Hill, Pa.—Factory of William Rose, Inc., destroyed.

Galveston, Tex.—Waterfront fire destroying 300 feet of pier and whse. structure and baled cotton.

Rodessa, La. — Hotel, barber shop, drug store, beauty shop, service station and two other dwellings, destroyed.

Chicago, Ill.—Whse. occupied by International Textile Co. damaged.

Thousand Islands, N. Y.—Summer home of E. B. Gale, Sr., Frederick Island, destroyed. Defective wiring.

Tacoma, Wash.—St. Louis Hotel destroyed. Cigarette.

Atmore, Ala.—Watson Hardware Co. destroyed; Forte Furniture Store damaged.

Davenport, Ia.—Bldg. occupied by Venard Equipment Co. destroyed.

Lebanon, Va.—Clinch River Motor Co., adjourning bldgs. housing county welfare office and a restaurant, damaged.

Marion, Va.—The Piggly-Wiggly grocery store and whse. operated by Charles Glenn and Frank Copenhaver, damaged.

Elmhurst, Ill.—Immaculate Conception Catholic Church's social center, destroyed.

Bucksport, Me.—Maine Seaboard Paper Division garage and dock of Time, Inc., destroyed.

Grants Pass, Ore.—McDonald's Lodge, Gold Hill, destroyed. Fuel oil tank explosion.

Portland, Ore.—General Petroleum dock barge destroyed. Explosion.

Wendling, Ore.—Booth Kelly Lumber Co. power plt. destroyed.

Oroville, Wash.—J. D. Hamilton, Dave A. Thorndyke fruit cold storage plt. destroyed. Cigarette.

Rocky Ford, Colo.—American Crystal Sugar Co.'s plt. damaged.

Northfield, Minn.—O. T. McLaughry Bldg., occupied by Northern States Power Co., Northfield Farm Store, Dusek's Bakery, Masonic hall and seven apts., destroyed.

Racine, Wis.—Business block of Buffhams, Inc., paint and home furnishings store, destroyed. Adj. annex damaged.

Palmer, Alaska—Palmer Rooming House, restaurant, liquor store, destroyed.

Sylvester, Ga.—Sylvester Peanut Co., a processing plt., destroyed.

Chicago, Ill.—D. K. Products, Inc., damaged.

Williamstown, Ky.—Half-Way House, Route 25, destroyed.

Du Bois, Pa.—Workshop of Pohe Motor Co. garage damaged. Spark from acetylene torch.

Huntington, W. Va.—Gwinn Bros.' Freight Whse. destroyed.

The Round Table

(*Continued from page* 788)

waited until the city hired the painters, I'm afraid we would have very little of it done.

I believe it is more economical to have firemen do the job. As a rule nearly every fire department has some very capable mechanics on the job, including painters, and I believe that painting done by members of the department is just as satisfactory as that done by outside help.

Lucius B. Smith, Chief, Billings, Mont.: It has been the practice in our department to do all interior painting and decorating, as well as touch-up work on the equipment. However, exterior painting has been done by regular painters.

Since there is a tendency for our firemen to take more interest in their quarters by keeping them well painted and clean, I feel that such practice should be continued. It is far more economical, and our work has been satisfactorily done.

J. J. Clark, Chief, Iowa City, Iowa: It is our practice to have firemen do small paint jobs around the fire station. We believe that the results are as economical and as satisfactory as when outside painters do the job.

Fyr-Fyter equipment has proven its value in preventing small fires from becoming disastrous through the loss of life and property. Recent catastrophic fires with terrific loss of life emphasize the urgent need of fire protection. A complete line of Underwriters Laboratories labeled Fire Extinguishers.

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Add "IMP" Chimney Fire Extinguisher to your line. Write today for special distributor plan.

Ralph B. Harnden, Chief, Auburn, Me.: We find that we not only get valuable experience by doing our own work, but the work is done well and we get more for the money.

In our small city of only 19,000 people, they are apt to think we are lazy if we do nothing around the station. If they see us cleaning up and painting, it does a lot for our public relations.

L. L. Petrey, Chief, Mobile, Ala.: Painting of our fire stations is done by city painters from the Building Department. I believe this is a more satisfactory arrangement, and that the firemen's time after his general house work is completed and apparatus cleaned, should be spent in school work, fire prevention and fire fighting in general.

R. G. Duren, Chief, Greenwood, Miss.: All painting and ordinary maintenance in the station is done by the firemen.

I find it much more economical and satisfactory as the painting can be done more often and where needed most to keep the stations fresh and clean at all times.

R. J. Van Fleet, Chief, Hastings, Neb.: It has been our practice to do all interior painting and this has been very satisfactory in the past. However, in the lean years when regular painters were not busy, some objections were raised by them. However, with all regular painters overloaded with work, as they are at the present time, there is no objection to the firemen doing this work.

The cost of painting jobs at the present time is extremely high. Therefore, it is much more economical to have the firemen do the work.

Albert Luedeke, Chief, Freeport, Ill.: Small painting jobs at the fire station are usually done by the firemen. They take their time and do a very neat job.

The city furnishes the paint and therefore the labor end of it is saved, which makes it more economical.

Orie A. Hand, Chief, Lincoln Park, Mich.: We of the fire department do all the painting in the department.

A. F. Broussard, Chief, Lafayette, La.: When small maintenance jobs are to be done around the station, the firemen do them. They enjoy doing these small maintenance jobs as they make the fire station a better place to live in and it also passes the time.

When painters or other mechanics are hired to do work around fire stations, it is always economical and satisfactory or they would not get the job. We do not expect firemen to take the place of skilled mechanics. The tools needed to do skilled jobs would cost too much and also material might be wasted or ruined by firemen. A chief always figures the best and most economical way out.

Dan E. Lake, Chief, Hobbs, N. M.: Small painting jobs are done by members of the fire department, but since our fire station is located in the city hall building, all major painting jobs are contracted out to paint contractors. We do paint the floor in the apparatus room and do other interior work where only a small area is involved. Painting the dormitory, locker room and other larger areas is handled through the city clerk's office. We find that our men can do as good a job as paint contractors,

DUAL FIRE FIGHTER

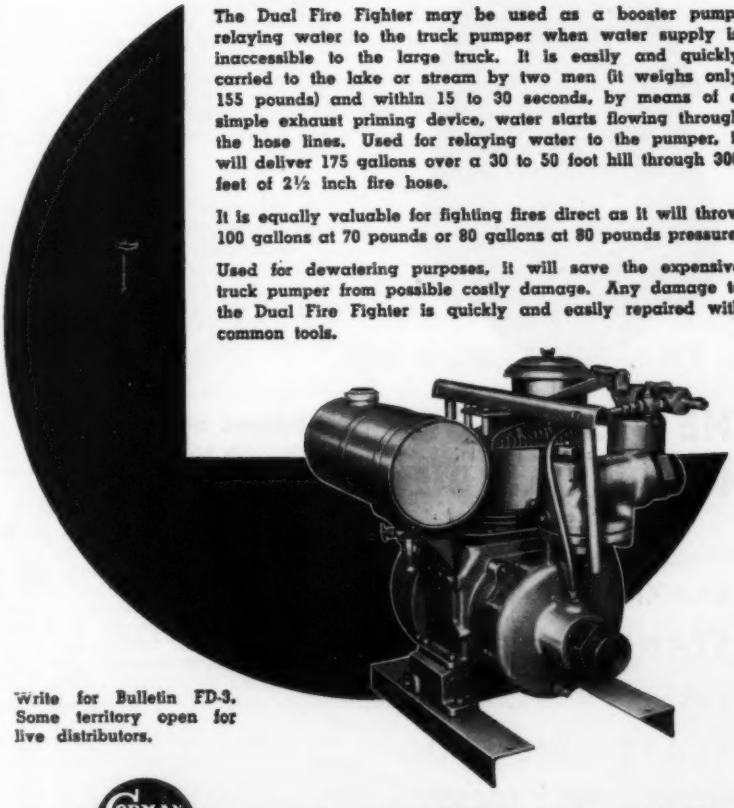
fights fires direct - or relays water to pumper

This handy little Gorman-Rupp pump is sometimes nicknamed the "DO-ALL" because of the many purposes for which it may be used. It is a valuable addition to any fire fighting equipment.

The Dual Fire Fighter may be used as a booster pump, relaying water to the truck pumper when water supply is inaccessible to the large truck. It is easily and quickly carried to the lake or stream by two men (it weighs only 155 pounds) and within 15 to 30 seconds, by means of a simple exhaust priming device, water starts flowing through the hose lines. Used for relaying water to the pumper, it will deliver 175 gallons over a 30 to 50 foot hill through 300 feet of 2½ inch fire hose.

It is equally valuable for fighting fires direct as it will throw 100 gallons at 70 pounds or 80 gallons at 80 pounds pressure.

Used for dewatering purposes, it will save the expensive truck pumper from possible costly damage. Any damage to the Dual Fire Fighter is quickly and easily repaired with common tools.



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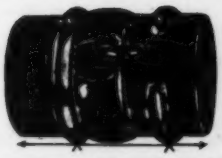

BI-LATERAL FIRE HOSE CO.

20 No. Wacker Drive, Chicago, Ill.

and probably all future work in the fire department will be done by firemen on duty.

R. W. Alsip, Chief, Champaign, Ill.: In Champaign we used to do all of the interior decorating because the men prided themselves on the cleanliness of their quarters, and it was financially impossible for the city to paint the interiors of our stations as often as we would like to have it done. We therefore did the job ourselves and the city furnished the paint. However, the Federation of Labor here recently objected to it and our Commissioner of Public Property asked me to desist from this practice.

Whether or not the results are economical depends on the calibre and quality of the painters that are hired. Just because a man can swing a brush is no reason he is a painter. I have insisted, when we have had our painting done recently, that it be awarded to good, reliable union contractors, and I have had a very fine job given me.

* * *

The following reply is in answer to a previous question on dewatering basements.

L. F. McDonald, Chief, Jackson, Miss.: This department dewaters basements of buildings following fires with suction syphons. This method has proven very satisfactory. There are no charges for this service.

Echoes of the War

By Roi B. Woolley

How Hot Is Hot?

Another post-war off-shoot of the war is the "hottest torch ever made".

The torch, exhibited publicly for the first time at the final sessions of the American Chemical Society's meeting in Chicago, September 13, is a flame made by two gases, fluorine and hydrogen. The heat developed is more than 6,000 degrees Fahrenheit, which is the surface temperature of some "cool stars."

According to published reports, this torch is hotter than either oxy-acetylene or oxy-hydrogen. However, hot as this is, it is not the hottest flame produced by man. That, except from atomic bombs, comes from electrical arcs exceeding the sun's surface temperature of 10,000 degrees.

The torch, which is suitable for welding copper (which requires abnormally high heat) was developed by Dr. A. V. Grosse of the Houdry Process Corp. and Homer Priest of the Oak Ridge, Tenn., atomic laboratories.

* * *

Atomic Repercussions

An atomic bomb, exploded in any of the world's great seaports as the bomb was exploded beneath the surface of Bikini Lagoon, would paralyze that port "indefinitely," according to Dr. R. A. Sawyer, University of Michigan physicist, who was technical director in charge of all instrumental observations at Bikini.

Dr. Sawyer said the chief menace of the bomb was radioactivity, so underwater explosions were more effective than those in midair. Radioactivity per-

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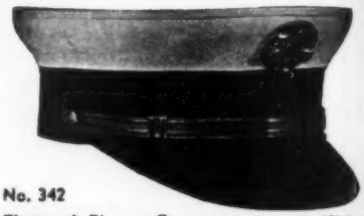

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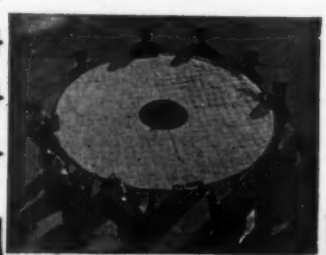
Specify ATLAS when you want dependable life nets.



ATLAS SAFETY EQUIPMENT CO., INC.
26 Warren St. New York 7, N.Y.

sists in water, Dr. Sawyer said, but dissipates in air. "It will not be safe for anyone to live on any of the Bikini ships for at least six months," he continued. "Men may board them for various lengths of time. For instance a man can now stay on the destroyer Cunningham for as long as twenty-four hours, but at first radioactivity was so great, we had to use seven-man relays to remove instruments from the ships."

* * *

The stockpile and production rate of atomic bombs—present and projected—are major factors in assessing the potential of atomic warfare, the Bikini atom bomb tests showed. Dr. Karl T. Compton, chairman of the joint Chiefs of Staff Evaluation Board, says that we must think of future atomic warfare—not in terms of one or two bombs—but of many bombs.

Bikini's principal value, according to information released by Dr. Compton, was in defining closely and accurately the characteristics, power, capacity and limitations of the present bomb. . . . It is clear from Bikini, say reports, that the atomic bomb is far more than an another weapon; that it is the most terrible and destructive weapon now known to man. It is also clear that as of the present it is not the "absolute weapon" and that it cannot, as of the present, entirely replace other weapons, said the press reports of Dr. Compton's interview, adding: "It is clear, therefore, that a large nation like the United States or the Soviet Union reasonably well prepared for atomic war—that is, with its cities ready for partial evacuation, its industries and its military installations rather well dispersed and with atomic bombs of its own—cannot be conquered by a few atomic bombs unless its nerves fail."

According to Dr. Compton, a few atomic bombs of the present type Bikini showed, will certainly not destroy a large nation's capacity to resist, and probably will not destroy its will to resist.

* * *

Hot Off the News Ticker

The Army transport Edmund B. Alexander was rocked by an internal explosion near the Weser Light Vessel, fifteen miles from Bremerhaven, Germany early in September but the 343 persons in the crew were removed safely. . . . Fire broke out on the main deck of the liner Queen Mary in September, but was soon extinguished by crew fire-fighters, assisted by port firemen of Halifax. . . . The entire dock area of Pictou, Nova Scotia, was threatened by a waterfront fire which did $1,000,000 damage to Dominion freight sheds, freight cars, repair jetty and shops. Help was rushed from neighboring Pictou County towns. . . . A German V-2 rocket fired by the Army technicians at White Sands, N. M., exploded at 20,000 feet elevation, crashed to earth about a mile and three-quarters from the launching platform. Exploding fuel shot flames 1,000 yards in all directions. . . . Fire that broke out as reveille was being sounded damaged a service club in Camp Kilmer. Two fire companies from New Brunswick aided the camp fire-fighters to control the blaze in the large flame building, which housed a cafeteria, library, lounge, dance hall and game room. . . . Echoes of the British-Palestine troubles were heard in New York when anonymous

DESIGNED TO TAKE IT...

Each year, with the help of National Fire Prevention Week, you do your best to educate your community in the defense against fire.

But, in spite of this intensive campaign, America still loses **over 9,000 lives a year and over a million dollars a day, through fire!**

Facing these facts, it is more important than ever to keep your fire-fighting apparatus adequate, reliable and READY. That's why experienced Fire Companies insist on a pump tough enough to stand up under the call for "More Volume and Pressure"!

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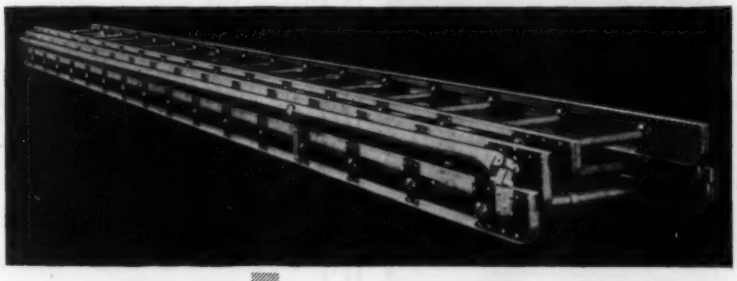

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telephone calls warned that the 25-story Cunard Building on Broadway, Manhattan would be blown up. . . . In Beyrouth, Lebanon, two bombs were hurled through the window of the American Consulate causing considerable damage. . . . While unloading in Haifa Harbor, the British tanker Empire Cross exploded and sank. Twelve of a crew of thirty to forty were rescued. It is reported not known whether or not Jewish terrorists were responsible. . . . Three oil pipe lines serving the port of Haifa were cut and set on fire, amongst other acts of depredation in that area. . . . Fire damaged the United States cruiser Huntington at Rome, Italy, it is said. The blaze started in insulation on the second deck. British Royal Navy fire service aided the ship's crew to extinguish the fire. . . . A tear gas bomb, said to have been a war souvenir, exploded and routed several hundred Baptists from Glenwood Church, Kingsport, Tenn., and startled a Methodist congregation at Highlands Church nearby. Three sharp explosions were heard and acrid fumes routed the congregations in tears. The cause? A boy "experimenting" in his own backyard. . . . A large ammunition explosion in Vladivostok, Siberia, which sank a ship in the harbor and blocked the port is reported to be the latest of a series of post-war incidents in Russia that have emphasized the internal difficulties of the Soviet state, say press reports. The blast was laid to sabotage. . . . On October 1, 500,000 pounds of explosives—old but still potent—were set off at the Navy's Arco Proving Grounds, Arco, Idaho, "to see what happens when 250 tons of TNT explodes at one time. The test charge was arranged in the center of the proving ground with 1,500,000 pounds of additional powder nearby. The object was to determine if this additional powder was stored safely. Thus far no report of the results have been released. . . . Medical aid was dispatched by air through thunder storms and low clouds, via Coast Guard heroes to help treat injured men aboard the stricken tanker Bennington 225 miles off Savannah, Ga. Six crew men were dead or missing and two others critically burned in the explosion and fire, which destroyed the fore part of the 10,172-ton tanker. Later the ship made port under her own headway, the crew having extinguished the remaining fire.

Tentative Dates for I. A. F. C. Conference

The annual Directors' Meeting of the International Association of Fire Chiefs is usually held the latter part of January, at which date hotel facilities for conventions of the year are so fully tied up that the few remaining open dates are unsatisfactory.

This applies particularly to New York City which entertains hundreds of conventions during the course of the Summer.

In order to make sure that the International Association of Fire Chiefs would not lose out by waiting until the annual Directors' Meeting to select dates, President Charles A. Delaney of Lakewood, Ohio, and Secretary-Treasurer Daniel B. Tierney of Arlington, Mass., together with Deputy Chief John J. T. Waldron, representing the New

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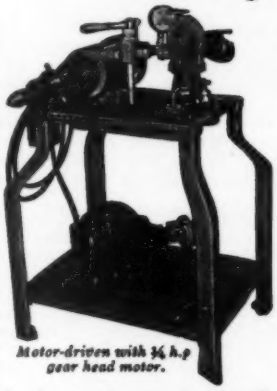
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York City Fire Department, met with the hotel officials in New York on September 30.

As a result of this meeting, and taking into account the wishes of the host city, a tentative date of August 19 to 22nd, inclusive was set for next year's conference. These dates, of course, are subject to the approval of the Board of Directors when it meets in New York early next year.

The Hotel Pennsylvania, where the annual directors' meetings of the Association are held, was considered the most suitable hotel for the conference, in view of the facilities available for exhibits, meetings, and other features of the annual conference.

As no suitable exhibit hall is available, and which is located near any of the larger hotels, it is probable that exhibits for next year's conference will be held in the hotel. In this connection, the Hotel Pennsylvania is particularly well equipped to handle the conference, for commodious exhibit space is available on the same floor where meetings will be held. In addition, the Hotel Pennsylvania management will set aside sufficient rooms for all those attending the conference.

Freon, a Fire Extinguisher

The Freon chemical compounds that are used in household refrigerators and in air-cooling systems now have a new job. They are found to be effective in extinguishing fires.

Freon is well-known to soldiers. It is the carrier for DDT, compressed into the aerosol bomb, which when released made an effective spray to kill mosquitoes and other insect pests. The Freons are harmless to men, being nontoxic, non-combustible, non-explosive and non-irritant.

The use of Freons to extinguish gasoline fires is recommended by the U. S. Bureau of Mines because of their effectiveness determined by a study of six inert gases and their effects on three different types of gasoline.

Among the six gases tested, Freon 11 was found to be the most effective flame-quenching agent. Freon 12, Freon 21, carbon dioxide, automobile-exhaust gas, and nitrogen were next best in the order named.

Gasoline is one of the chief causes of costly fires and explosions because it is used by industry, the Bureau states, in a greater quantity and a wider range of applications than any other combustible liquid. Gasoline fires in or about mines are not uncommon.

The Freons are a series of compounds containing the same elements but in different proportions. They are made by introducing fluorine into chlorine derivatives of methane gas. Their chemical names indicate that they contain both chlorine and fluorine.

Freon 11 is trichloromonfluoromethane, a long word but easily understood when divided into syllables: tri-chloromono-fluoro-methane. Freon 12 is dichlorodifluoromethane, and Freon 21 is dichloromonofluoromethane. Freon 21 is probably the one most commonly used in refrigerating and air-cooling systems. Freon 11, the best flame-quenching agent among the six inert gases tested, is used in centrifugal compressors feasible only for large refrigerating or air-cooling units.

SCIENCE NEWS LETTER,
August 31, 1946

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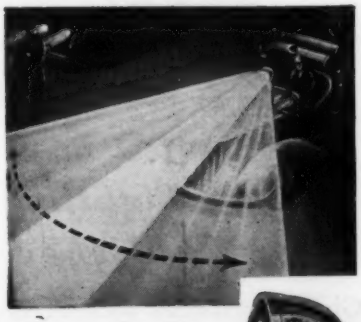

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POSITION WANTED

Retired fire captain (27 years service) seeks position on municipal fire department, or with large firm as fire prevention inspector, etc. Presently employed as fire chief at naval station. Age 45. Salary and job location no object. Box 65, Fire Engineering, 24 West 40th Street, New York 18, N. Y.

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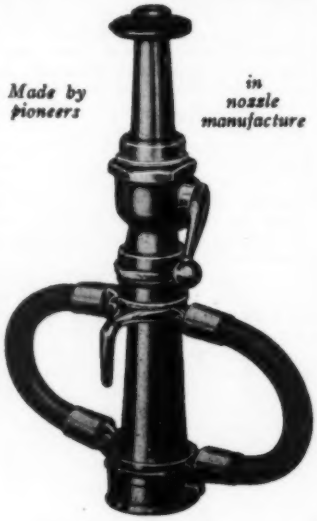
"All American Choice"

Made by pioneers in nozzle manufacture



INVINCIBLE NOZZLES

F. N. McINTIRE BRASS WORKS
Successors to A. J. Morse & Son, Inc.
BOSTON, MASS.
1837 — 1945

FA 26

HARRINGTON FIRE ALARM BOX

Sixteen round succession non-interfering fire box with grounding device. Made of cast aluminum inside as well as out, which means fast, light, easy installation and a long, corrosion-free life.

They are equipped with quick action doors and are non-interfering, of the shunt and successive type circuit.

HARRINGTON SIGNAL COMPANY
MOLINE - - - - ILLINOIS

HOSE BRASS GOODS
WB LINE
THE WOOSTER BRASS Co.
WOOSTER, OHIO

SOME WORDS FOOL YOU

like

RAISE (to erect) RAZE (to destroy)

BUT

WOOSTER BRASS always means the BEST in fire equipment supplies.

THE WOOSTER BRASS CO.

WOOSTER, OHIO

When you specify products bearing the TRUMPET trademark, you can SAVE and BANK on SAFETY.

BODY-GUARD
BUNKER SUITS
FOR COMFORT & PROTECTION

WE ARE DISTRIBUTORS FOR
SIREN BOOTS

We have been supplying FIREMEN'S CLOTHING for over 25 years.

Any fireman can have a catalog by writing—

BODY-GUARD MANUFACTURING CO.
ST. JOSEPH MISSOURI

Classified Advertisements

FOR SALE

1923 American La-France Triple Combination 750 G.P.M. Pumper fully equipped and 1931 Ford Booster Truck with 100 G.P.M. Pump and 300 Gal. water tank also fully equipped. Both trucks are now in service and are for immediate possession by purchaser. McKINLEY FIRE CO. NO. 1; McKinley, Philadelphia 17, Pa.

Fire Administrators Wanted

The War Department is now selecting scientific and technical personnel to staff the Civil Intelligence Section of the Office of the Supreme Commander, Allied Powers, in Tokyo, Japan. This section has been established for the purpose of advising on all intelligence and public safety problems connected with the reorganization of Japan.

The reorganization and supervision of the Japanese fire system is one of the most important and difficult functions to be performed by the Public Safety Division of the Civil Intelligence Section. A recent communication from General MacArthur's headquarters requested that this office select two experienced fire administrators to serve in Japan. The following is a statement of the duties and necessary qualifications of these positions:

Policy level. Under 45 years of age. With experience as chief of fire department in cities of 100,000 to 200,000 or comparable positions in larger city departments. Duties: To advise the chief of the fire branch on matters of fire prevention, protection and fighting. To assist in the reestablishment of the Japanese system of fire administration.

These positions have been established as Fire Administrators, CAF-12, $5905.20 per annum, plus 25% differential, and are for a minimum tour of duty of 12 months.

Individuals desiring to be considered for the positions described above should forward a completed copy of Standard Form No. 57 to Mr. E. J. Bruck, Overseas Branch, Office Secretary of War, Room 5-D-887, Pentagon, Washington, D. C. Standard Form No. 57 can be obtained from the local Civil Service secretary at any post office.

Southwestern Chiefs to Meet

The Southwestern Division of the International Association of Fire Chiefs will hold its annual convention in Monroe, La., on October 31 to November 1, 1946.

The Headquarters hotel will be the Virginia Hotel, where ample arrangements have been provided for the meeting and for the delegates.

Chief Frank McAuliffe of the Chicago Patrols, and First Vice-President of the International Association of Fire Chiefs, will be the principal speaker. His topic wll be "Hotel Fires." Many other capable fire protection authorities will also participate in the program, and will present subjects of timely interest.

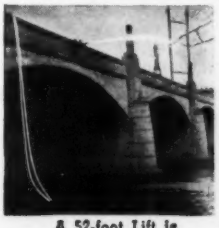
Chief M. J. Brun of Fort Smith, Ark., is President of the Southwestern Association; Chief D. P. Rachal, Port Arthur, Tex., is First Vice-President; Chief Dan E. Lake, Hobbs, N. M., Second Vice-President; and Chief G. R. McAlpine of Oklahoma City, Okla., Secretary-Treasurer.

"FIRE INSURANCE" FOR FIRE CHIEFS

Derbyshire ACCEL-O-RATE Model 2½

Any Fire Chief who has watched a building burn because of lack of water, or who is serving rural areas dependent on wells, creeks, and other inaccessible sources, to supplement the booster tank, needs an ACCEL-O-RATE Jet Pump Booster.

The ACCEL-O-RATE is now fully accepted—at the Cleveland International and other Conventions, at demonstrations all over the country, at classes in fire schools from coast to coast, and in actual use by progressive fire chiefs, the ACCEL-O-RATE proved that it is indispensable to any fire department serving rural or semi-rural areas.



A 52-foot Lift is Easy with the ACCEL-O-RATE

The ACCEL-O-RATE cannot fail or clog—never has—never will. There are no moving parts. If your pumper is able to deliver water under pressure, that is all the ACCEL-O-RATE needs. It is carefully engineered by one of the country's specialists in jet pump design and manufacture. Further, did you know the ACCEL-O-RATE can also be used to pump out flooded cellars, etc., with hydrant pressure alone?

Our new Bulletin 46 describes the Model 2½ ACCEL-O-RATE and announces the new Model 4-HH, which is a larger unit and daddy of the line. It is just off the press—write for your copy, and either arrange to visit a Fire Chief who has one or see your dealer.

The Model 2½ sells for $145.00 F.O.B. Philadelphia, Pa.

The ACCEL-O-RATE is NON-CLOGGING, your best assurance of water on the fire when you want it.

BUDGET FOR AN ACCEL-O-RATE!

JET PUMP DIVISION
DERBYSHIRE MACHINE & TOOL CO.
5222 BELFIELD AVE., PHILADELPHIA 44, PENNA.

ELKHART
Mystery Cellar Nozzle

PAT. NO. 2089304

THE outstanding value of the Mystery Fog Nozzle is known to all fire fighters. By combining the principle of the Mystery Fog Nozzle with the Bresnan Cellar Pipe, a new and invaluable instrument has been added to the profession.

This nozzle throws a dense, solid mass of fog, even at low pressure, 45 feet in diameter from ceiling to floor.

Even if not directly over the fire, the Mystery Cellar Nozzle is wholly effective, since heat draws fog, but cannot attract drops of water, owing to the weight of the drops.

Substantial water damage is eliminated. Cooling of entire enclosure is rapid. Smoke is quickly dispensed. Nozzle and firemen at floor aperture are protected by the actual ball of fog being discharged below floor level.

"The Mystery Nozzle Marches On"

ELKHART BRASS MFG. CO. Inc.

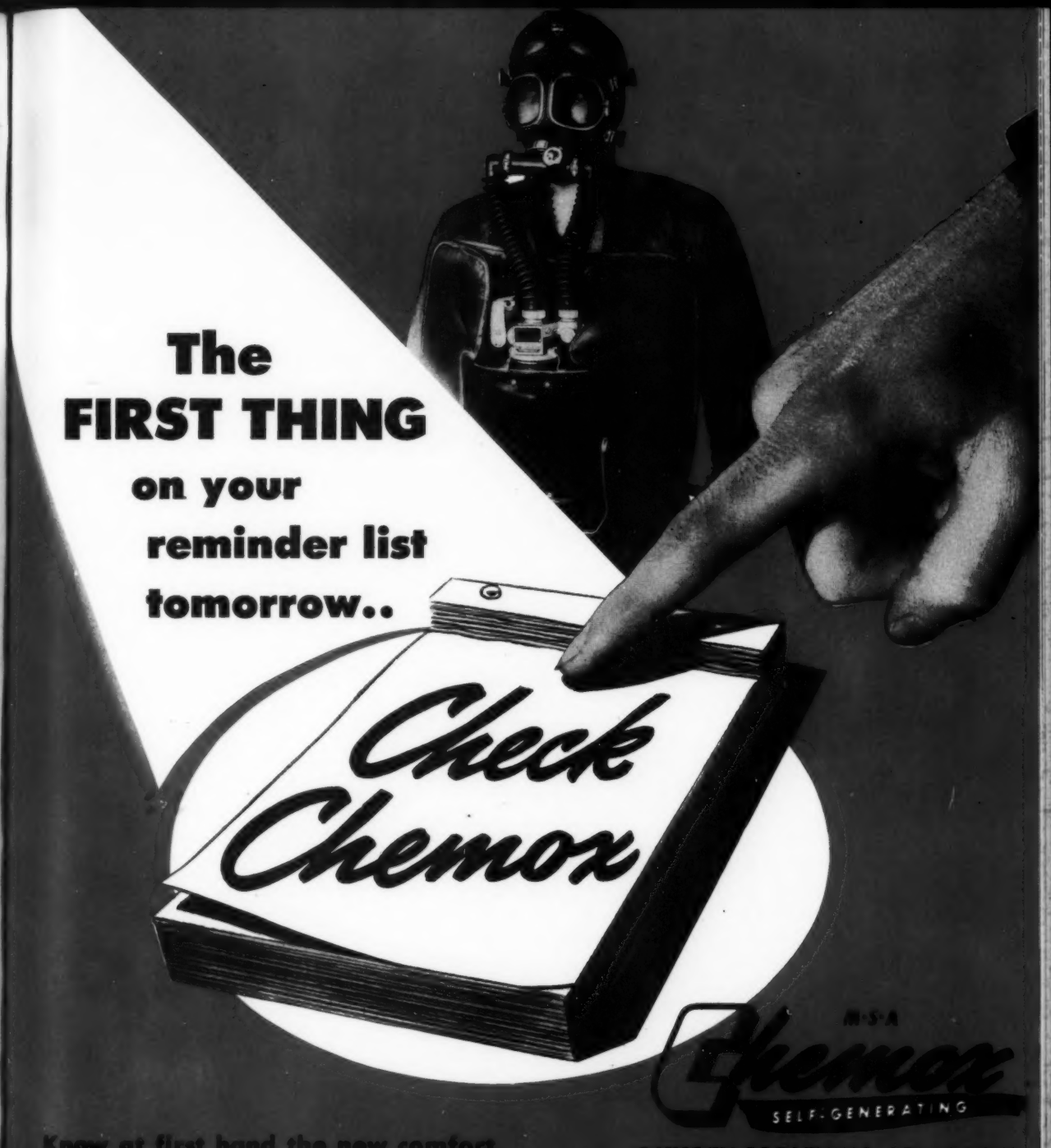
ELKHART, INDIANA

ADVERTISING INDEX

FIRE ENGINEERING

OCTOBER, 1946

	Page
Ahrens-Fox Fire Engine Co.	769
Akron Brass Mfg. Co., Inc.	745
Aluminum Ladder Company	793
American Die & Tool Co.	771
American-La France-Foamite Corp.	741
American Marsh Pumps, Inc.	788
American Rubber Mfg. Co.	772
Ansul Chemical Co., Fire Extinguisher Div.	737
Atlas Safety Equipment Co., Inc.	792
Bean Mfg. Co., John, Division Food Machinery Corp.	748
Bi-Lateral Fire Hose Co.	791
Body Guard Mfg. Co.	797
Boston Woven Hose & Rubber Co.	749
Braxmar Co., C. G.	792
Buckeye Iron & Brass Works	789
Carpenter Mfg. Co.	795
Circul-Air Corp.	794
Darley & Co., W. S.	784
Dayton Fire Equipment Co.	794
Derbyshire Machine & Tool Co.	797
Duo Safety Ladder Corp.	744
E. & J. Mfg. Co.	742
Elkhart Brass Mfg. Co.	798
Emerson Co., J. H.	Inside Front Cover
Eureka Fire Hose Div., U. S. Rubber Co.	770
Federal Electric Co., Inc.	735
Foard & Co., F. C.	790
Four Wheel Drive Auto Co.	Back Cover
Fulton Bag & Cotton Mills	794
Fyr-Fyter Co.	790
Gamewell Company	750
General Detroit Corp.	779
Gorman-Rupp Co.	791
Hahn Motors, Inc.	795
Hale Fire Pump Co., Inc.	793
Hardie Mfg. Co.	787
Harrington Signal Co.	796
Homelite Corp.	781
Howe Fire Apparatus Co.	789
Howland, W. H.	786
International Industries, Inc.	782
Janesville Apparel Co.	795
M & H Valve & Fittings Co.	790
McIntire Brass Works	796
Mack Mfg. Corp.	739
Manhattan Rubber Mfg. Div. of Raybestos-Manhattan, Inc.	743
Mearl Corp., The	788
Midwestern Mfg. Co.	783
Mine Safety Appliance Co.,	Inside Back Cover
National Foam Systems, Inc.	746
Oren Fire Apparatus Co.	777
Powhatan Brass & Iron Works	768
Pyrene Mfg. Co.	777
Quaker Rubber Corp.	778
Republic Rubber Div., Lee Rubber & Tire Corp.	785
Rockwood Sprinkler Co.	740
Scott Aviation Corp.	773
Sleeper Co., George E.	738
Smith & Co., D. B.	775
Steeltex Corp.	794
Sterling Siren Fire Alarm Co., Inc.	784
U. S. Motors Corp.	780
Ward-LaFrance Truck Div., Great American Ind., Inc.	747
Waterous Company	774
Wentworth-Forman Co., Inc.	792
Wooster Brass Co.	797



The FIRST THING on your reminder list tomorrow..

Check Chemox

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Chemox

SELF-GENERATING

OXYGEN BREATHING APPARATUS

Know at first hand the new comfort, simplicity and safety CHEMOX provides for firefighters in meeting the hazards of unbreathable air on the job!

See for yourself why CHEMOX is revolutionizing the whole field of respiratory protection for the Fireman! Only 13½ lbs. *light*, yet gives *one full hour's protection* even during heavy exertion, making oxygen as you breathe! No cylinders, no high-pressure valves; CHEMOX is easy to use!

MAKES ITS OWN OXYGEN . . . IN A SIMPLE, REPLACEABLE CANISTER

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TORONTO . . . MONTREAL . . . CALGARY . . . WINNIPEG . . . VANCOUVER . . . NEW GLASGOW, N. S.

The new FWD Model F75T 750 gallon triple combination fire fighter. Designed according to recommendations of fire chiefs, it features an open type body with all equipment and controls readily accessible.

Every inch a FIRE FIGHTER

Well known in the field of fire-fighting for their dependable speed, power, traction and safety, FWDs have earned their reputation for being "every inch a fire fighter". These rugged four-wheel-drive trucks are engineered for the sort of emergency service demanded in getting to fires fast, with safety. Steep or slippery grades, mud or snow-blocked roads, are no handicaps to FWDs. They go through fast . . . all the apparatus controls are conveniently grouped for instant action . . . and they stand up for years of dependable service. Cities from coast to coast have proved that FWDs are a sound investment in fire protection.

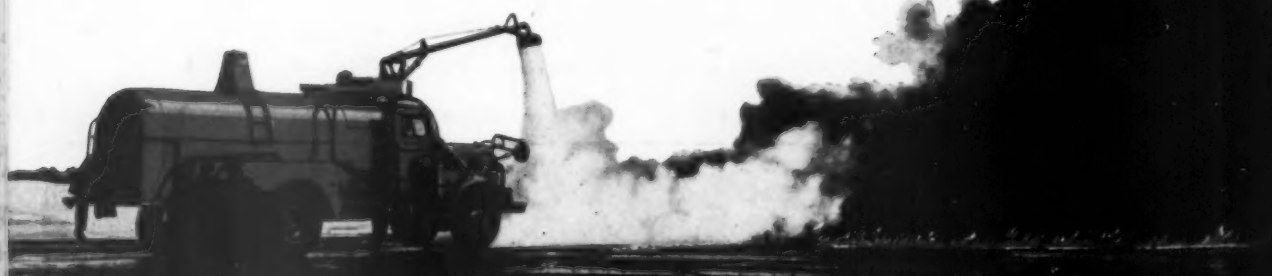
FWD TRUCKS

Cardox Airport Fire Truck on FWD Chassis

Releasing tons of zero-cold Cardox CO_2 that smothers gasoline fires . . . another example of FWD's ability to meet unusual fire protection needs.

THE FOUR WHEEL DRIVE AUTO CO., Clintonville, Wisconsin

Canadian Factory: KITCHENER, ONTARIO



• • America's Foremost Fire Fighting Truck • •